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AGRICULTURE

No. 1305

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MAJOR CROP PROGRESS AND WEATHER REPORTING

UZBEK LEADERSHIP HITS SHORTCOMINGS IN COTTON PRODUCTION

Tashkent PRAVDA VOSTOKA in Russian 15 Aug 81 pp 1-2

[Text] The Uzbekistan Communist Party Central Committee and the Uzbek SSR Council of Ministers note that the party, soviet, agricultural and procurement organs, kolkhozes, sovkhozes and enterprises of the republic in implementing the decisions of the 26th CPSU Congress and the 20th Uzbekistan Communist Party Congress and as a result of the great assistance and daily attention of the CPSU Central Committee and the USSR Council of Ministers have been conducting strenuous work to overcome difficulties, which arose as a result of this year's unfavorable weather conditions, and to ensure production and sale to the state in the first year of the 11th 5-Year Plan period of 5.9 million tons of raw cotton, including 375,000 tons of fine-fibred variety and at least 3.9 million tons of the yield harvested by machines.

However, as indicated by the results of mutual inspections, there are still rayons and farms where negligence has been allowed in organization and performance of work and in preparation for harvesting and procurement of the new yield.

On some farms in Dzhizakskaya, Surkhandar'inskaya, Bukharskaya, Kashkadarinskaya and Khorezmskaya Oblasts and Karakalpakskaya ASSR the quality of irrigation is poor and cultivation is not conducted on time, without complete sets of tools and is of poor quality. As a result there are areas abounding with weeds. Organic fertilizers are used insufficiently. The inspection service has not been organized on a proper level and focal infections of agricultural pests are not uncovered and treated promptly, thus allowing them to spread. Ground-based equipment, toxic chemicals and biological methods for combating these are being used inefficiently.

Serious shortcomings and neglect have been uncovered in preparation of equipment. A considerable quantity of cotton pickers, tractor trailers, cotton extractors and other equipment is not yet ready for work. On farms in Kegeyliyskiy, Beruniyskiy, Gurlenskiy, Koshkupyrskiy, Ishtykhanskiy, Zarbdarskiy, Akhunbabayevskiy and Alatskiy Rayons the readiness of cotton pickers is 40-75 percent. Not all harvesting equipment and transportation means are included in repairs. Machine operators in Bukharskaya, Namanganskaya and Khorezmskaya Oblasts and Karakalpakskaya ASSR have been insufficiently enlisted in repair work.

Instances of poor quality repair have been permitted. Of the repaired cotton pickers which were inspected 16 percent in kolkhozes and sovkhoses and 17 percent at repair enterprises of the State Committee for Supply of Production Equipment for Agriculture of the Uzbek SSR had serious violations of repair specifications. At the imeni Zhdanov sovkhos in Kashkadarskaya Oblast the 29 prepared cotton pickers had some 30 defects and in the "Moskva" kolkhoz in Gurlenskiy Rayon 50 percent of the repaired machines had flaws.

Proper attention has not been given to training and improving the skills of machine operators. In Bukharskaya Oblast there is a shortage of 500 drivers of cotton pickers for two-shift work.

Plants of the All-Union Production Association for the Production of Machines for Cotton Cultivation [VPO Soyuzmashkhlopkovodstva] have failed to insure timely supply of necessary individual spare parts and this has delayed repairs of harvesting equipment.

Preparation of procurement centers for receiving raw cotton is progressing slowly. The plan for installation of automatic scales has been fulfilled by 71 percent, for construction of new asphalt-paved baling platforms by 72 percent and for preparation of calibrating standards by 89 percent. Repairs of mechanical equipment are lagging in Dzhizakskaya, Syrdarskaya and Surkhandarskaya Oblasts.

The Uzbek Association for the Production of Cotton Farming Machinery [Uzbekkhlopkomash] has not ensured timely supply of spare parts, units and sets of machinery for the repair of ginneries, drying and cleaning shops and mechanical equipment.

In the adopted decree the Uzbekistan Communist Party Central Committee and the Uzbek SSR Council of Ministers stressed that the urgent task of obkoms and raykom raykoms, the Karakalpakskaya ASSR Council of Ministers, oblispolkoms and rayispolkoms, the Uzbekistan Council of Trade Unions and the Uzbekistan Komsomol Central Committee; ministries of agriculture, cotton ginning industry, land reclamation and water resources and procurement of the Uzbek SSR; the Main Administration for Irrigation and Construction of State Farms in Central Asia [Glavsredazirstroy], the Uzbek SSR State Committee for Supply of Production Equipment for Agriculture and their local organs; and supervisors and specialists of kolkhozes, sovkhoses and enterprises is to enlist efforts of worker's collectives in eliminating the lag in cotton industry development, in raising the rate of care for sown areas, in conducting timely and high-quality irrigation, in cultivating sown areas and in organizing a struggle against weeds and agricultural pests aimed at ensuring accumulation of a large and early harvest of good fiber raw cotton, completion of all preparatory work for collecting and delivering it to the state and achieving unconditional fulfillment by every kolkhoz, sovkhos, enterprise, section and team of the socialist pledges assumed for 1981.

For this purpose:

--Outline and implement in every brigade, kolkhoz and sovkhoz, with consideration of the state of cotton plant development, a complex of agrotechnical measures for strengthening the care of sown areas and enlist for this purpose all able-bodied people, equipment and mechanisms by establishing necessary cultural and personal conditions for their productive work;

--Increase the rate of repairs of cotton pickers, trailers, loaders, cotton extractors, cotton-scraping machines and pick-up attachments of means of maintenance and preparation for conducting ground defoliation and take into consideration that equipment preparation must be completed not later than two weeks before the beginning of harvesting work. Organize repair brigades and teams in every kolkhoz and sovkhoz, enlist all machine operators who are not working in the fields in repair work, provide them necessary conditions for two-shift work and develop socialist competition for timely and qualitative preparation of equipment;

--Repair enterprises of the Uzbek SSR State Committee for Supply of Production Equipment for Agriculture must insure fulfillment of established plans and tasks for high-quality repairs of cotton picking equipment, sets of machinery, units and their engines, deliver them promptly to farms and organize two-shift work of all repair workshops and plants;

--Activate the work of standing commissions on checking the quality of repairs and storage of agricultural equipment. Raise the responsibility of workers of the State Agricultural Inspectorate and supervisors and specialists of farms for high quality repairs and preparation of harvesting equipment;

--In the days immediately ahead complete staffing cotton pickers with experienced drivers and organizing harvesting-transportation detachments and supply them with means of maintenance and replacement stocks of units, sets of machinery, spare parts and repair materials. Improve the skills of drivers of cotton pickers everywhere and train them in leading methods of highly-productive equipment utilization;

--By 20 August ensure preparation of airfields, loading mechanisms and capacities, delivery of defoliants and staffing and training of personnel to carry out the defoliation;

--Ensure delivery of fuel and lubricants for continuous operation of harvesting equipment and means of transportation and devote special attention to their use in a thrifty and rational manner;

--Before the beginning of harvesting complete construction of new and repairs of existing field camps, asphalt-paved areas [khirmans], roads, bridges and weighing facilities;

--Expediently allocate areas for mechanical picking of cotton in sizes that will ensure successful fulfillment of assumed socialist pledges within shortest

possible periods, depending on the biological ripening of the plants, and conduct defoliation of cotton;

--Ensure the airplanes operating on the farms with dependable mechanized means for refuelling and loading defoliants and with washing and refuelling devices, establish proper cultural and personal conditions and medical services for airplane crews and assign them to farms immediately upon arrival;

--Introduce the Tashkent method of cultivating cotton plants, conducting defoliation and organizing harvesting and procurement of raw cotton. Ensure high-quality use of ground-based and harvesting equipment and transport and loading facilities;

--Improve the use of cotton pickers in harvesting fine-fiber varieties and raise the level of mechanization of harvesting;

--Widely adopt measures to provide moral and material incentives to leaders of cotton growing teams, drivers and pickers of cotton for high-quality harvesting and preventing losses of raw cotton;

--Prepare necessary lodgings for cotton pickers and machine operators engaged in harvesting, with good insulation, lighting and supply of fuel and observe sanitation and hygiene conditions in them. Organize public dining and trade facilities. Improve the work of children's preschool institutions.

Obkoms and raykoms, the Karakalpakskaya ASSR Council of Ministers and oblispolkoms and rayispolkoms; the UzSSR ministries of Agriculture, Cotton Ginning Industry and Procurement, Glavsredazirsovkhozstroy and the UzSSR State Committee for Supply of Production Equipment for Agriculture and their local organs; the Central Asian branch of the All-Union Academy of Agricultural Sciences imeni Lenin [VASKhNIL]; the All-Union Scientific Research Institute of Cotton Growing; the Scientific Research Institute of Cotton Plant Breeding and Seed Growing imeni G. S. Zaytsev; and the Uzbekistan Association for the Procurement and Sale of High-Quality Cotton Seeds [Uzsortsemkhlopkoprom] were suggested to:

--Conduct organizational and explanatory work everywhere among supervisors, specialists and team leaders of kolkhozes and sovkhoses, drivers of cotton pickers, hand pickers and procurement center workers on the state importance of increasing, as of 1982, the additional charge to procurement prices in force for raw cotton and cotton plant seeds and the harvesting and procurement of high-quality raw cotton within the shortest possible periods without losses and also for preventing its spoilage during harvesting, hauling, storing and processing;

--Allocate the best, high-quality productive sown areas for the procurement of seed stock, ensuring maximum allocation to seed cotton areas rezoned this year and new perspective varieties of cotton plants possessing high-quality fibers. Conduct defoliation of sown seed areas, with the exception of those earmarked to be mechanically harvested by multistage machines, after completing manual picking of seed cotton and fulfilling the task of procuring seed stock by every rayon and seed growing farm;

--Raise personal responsibility of supervisors and specialist of kolkhozes, sovkhoses, procurement organizations, teams and pickers for harvesting, receiving, storing and processing of seed cotton according to the requirement of the All-Union State Standard;

--For the purpose of material motivation of cotton seed pickers make it incumbent upon directors of sovkhoses and recommend to kolkhoz administrations to establish work norms in manual seed cotton harvesting 20-25 percent below the norm established for harvesting industrial raw cotton;

--Ensure preferential placement and storing of seed cotton harvested by multi-stage machines on plant territories of cotton procurement centers, time its priority cleaning not later than 30 days after making up batches, completing its primary processing in drying and cleaning shops before placing it in bales. Prevent conversion of seed cotton to industrial raw cotton.

The Uzbek Civil Aviation Administration must provide the necessary number of airplanes and helicopters on demand of the UzSSR Ministry of Agriculture. Crew commanders must be required to strictly observe the established defoliation rules, ensure high-quality work and productive use of airplanes and observe conditions of labor safety practices.

For purpose of timely haulage of raw cotton from the republic's virgin land sovkhoses, the UzSSR Ministry of Motor Transport and oblispolkoms must assign 850 cotton-hauling vehicles to Dzhizakskaya, Kashkadarinskaya, Surkhandarinskaya and Syrdarinskaya Oblasts for the duration of the harvesting period.

The UzSSR ministries of Agriculture and Cotton Ginning Industry, Glavsredazirsovkhozstroy, the republic administration of the USSR State Committee for Standards and the Tashkent "Etalon" experimental plant must by the harvesting season complete the repair and marking of weighing and measuring instruments in kolkhozes, sovkhoses, cotton plants and procurement centers.

The Uzbekbriyash, the UzSSR ministries of Trade and Cotton Ginning Industry, the UzSSR State Committee for Supply of Production Equipment for Agriculture, the UzSSR Gossnab, the Karakalpakskaya ASSR Council of Ministers and oblispolkoms are charged with supplying the required quantities of spring balance scales, aprons, sacks, flasks, coal, stoves and hot-water boilers as well as clothing, footwear, foodstuffs and other goods needed by the villages during the cotton harvesting and procurement period.

The UzSSR ministries of Light and Local Industries, Internal Affairs and Cotton Ginning Industry are ordered to ensure timely and complete supply to the republic's consumer cooperative organizations of special clothing, kersey boots, packing fabric, cast iron stoves and other necessary supplies and make up for underloading of these goods from the funds of the first half of the year.

The UzSSR ministries of Road Construction and Maintenance, Agriculture and Cotton Ginning Industry, Glavsredazirsovkhozstroy, the Karakalpakskaya ASSR Council of Ministers and oblispolkoms and rayispolkoms are charged to conduct, before the start of cotton harvesting, the repairs of motor roads and bridges,

based on ownership, and also of access routes to kolkhozes, sovkhoses and procurement centers.

The All-Union Production Association for the Production of Machines for Cotton Cultivation [VPO "Soyuzmashkhlopkovodstva"] will ensure supply to agriculture of necessary spare parts for repairs of harvesting equipment and the Uzbek Association for the Production of Cotton Farming Machinery ["Uzbekkhlopkomash"] will ensure production and supply of equipment and spare parts to cotton plants.

The UzSSR Gosstab will supply necessary rolled metal products to enterprises of Uzbekkhlopkomash, in accordance with allocated funds.

The UzSSR Ministry of Internal Affairs, the Karakalpakskaya ASSR Council of Ministers and oblispolkoms and rayispolkoms are ordered to inspect fire safety in advance in all kolkhozes, sovkhoses and procurement centers as well as fulfillment of measures recommended by organs of the State Fire Inspectorate.

The UzSSR ministries of Culture, Consumer Services, Health and Communications are to work out and implement measures to ensure exemplary services to kolkhoz farmers, sovkhos workers, enlisted and other workers engaged in harvesting and procurement of raw cotton.

For the purpose of ensuring the manpower requirements of enterprises producing baling fabric, the UzSSR State Committee for Vocational and Technical Education will assign against the training plan of the UzSSR Ministry of Light Industry graduates of technical school No 85 to the Tashkent ambary hemp factory in accordance with coordinated trades.

Obkoms and raykoms, the Karakalpakskaya ASSR Council of Ministers, oblispolkoms and rayispolkoms, the UzSSR Ministry of Agriculture and Glavsredazirsovkhozstroy and their local organs are charged with working out and implementing measures jointly with trade union organizations aimed at making available from the beginning of harvesting all able-bodied people in kolkhozes, sovkhoses and agricultural enterprises to harvest cotton and with developing socialist competition for fulfillment and overfulfillment of daily norms by all drivers of cotton pickers and hand pickers of cotton. Also to widely use measures of moral and material stimulation of machine operators, kolkhoz farmers and sovkhos workers engaged in harvesting raw cotton.

The republic, oblast and rayon trade union committees of agricultural workers of the Uzbek SSR must ensure control over correct and timely payment of wages to kolkhoz farmers, sovkhos workers and machine operators as well as adherence to rules for labor safety procedures and practices while working with defoliants and machines.

The Uzbekistan Komsomol Central Committee must ensure active participation of Komsomol organizations in preparing equipment and drivers and in broadly developing socialist competition for top quality harvesting and procurement of raw cotton of the new harvest.

For the purpose of providing incentive to the Karakalpakskaya ASSR, oblasts, rayons, kolkhozes, sovkhoses, leading machine operators and hand pickers of cotton for high rate of harvesting and high grade of the raw cotton delivered to the state to institute challenge red banners of the Uzbek Communist Party Central Committee, the Presidium of the UzSSR Supreme Soviet and the UzSSR Council of Ministers:

--Two red banners for the Karakalpakskaya ASSR and oblasts;

--Four red banners for rayons, including one for encouraging rayons delivering raw cotton of the fine-fiber variety to the state and one red banner for encouraging virgin land rayons;

--Three red banners for sovkhoses, including a red banner for encouraging virgin land sovkhoses and one for sovkhoses delivering fine-fiber raw cotton;

--Two red banners for kolkhozes, including one for kolkhozes delivering fine-fiber raw cotton.

To award challenge red banners once every 10 days, beginning with the results for the first 10-day period in September. In awarding red banners, fulfillment of the plan for overall volume of procurement and of the plan for machine harvesting of raw cotton must be taken into consideration.

In oblasts having a plan for production of fine-fiber raw cotton, introduce a conversion factor for the purpose of equating this cotton to a medium-fiber variety, in summing up the results: for Kashkadarinskaya and Surkhandarinskaya Oblasts of 1.3; and for Bukharskaya and Namanganskaya Oblast of 1.5.

Simultaneously with presentation of red banners allocate to the Karakalpakskaya ASSR and oblasts for the sale to drivers of cotton pickers who have achieved the best indexes for productivity and quality of cotton harvesting four passenger cars and 2000 rubles for cash awards; two passenger cars to rayons for sale to the best drivers and 500 rubles for awarding leading workers; one passenger car to sovkhoses for sale to the best drivers and 300 rubles for awarding leading workers; and one passenger car to kolkhozes for sale to the best drivers and 200 rubles for awarding leading workers.

For rayons, kolkhozes and sovkhoses which have been awarded red banners for high rate of harvesting and delivery of fine-fiber cotton to the state establish the following awards: three passenger cars for rayons for sale to the best drivers of cotton pickers and 700 rubles for awarding to leading workers; two passenger cars for sovkhoses for sale to drivers and 500 rubles for awarding leading workers; and two passenger cars for kolkhozes for sale to the best drivers and 300 rubles for awarding leading workers. Sell the aforementioned passenger cars to the best drivers of cotton pickers from the marketable stock of consumer cooperatives.

Obkoms, gorkoms and raykoms and party organizations of industrial enterprises and construction projects are charged with organizing aid through sponsorship of

kolkhozes, sovkhoses and procurement centers in construction and repair of asphalt-paved areas, drying and cleaning shops and intraorganizational roads and bridges as well as in repair and maintenance of cotton harvesting equipment.

The UzSSR Committee of People's Control, the UzSSR ministries of internal affairs, cotton ginning industry, agriculture and procurement, Glavsredazir-sovkhozstroy and the UzSSR State Committee for Supply of Production Equipment for Agriculture are ordered to strengthen control over the progress of preparations for harvesting in kolkhozes, sovkhoses, preservation and careful expenditure of material and technical resources and to devote particular attention to preventing losses and spoilage of cotton during harvesting, transportation, storage and processing.

The editorial offices of republic, oblast and rayon newspapers, Uzbek Telegraph Agency [UzTAG] and UzSSR State Committee for Television and Radio Broadcasting are charged with regularly elucidating in newspapers and over television and radio the progress of preparations for harvesting and procurement of raw cotton and the progress of harvesting and delivery of the new yield. Institute a board of honor on the pages of republic newspapers and record on it the oblasts and rayons which prefulfilled the plan for raw cotton procurement.

The Uzbek Communist Party Central Committee and the UzSSR Council of Ministers have expressed confidence that party, soviet, agricultural and procurement organs, trade union and Komsomol organizations, kolkhozes, sovkhoses, agricultural and industrial enterprises and the working people of the republic through their selfless labor and by broadly developing socialist competition will ensure a large and early harvest of raw cotton everywhere, carry out the harvesting campaign in an organized manner and within shortest possible periods while maintaining high work quality and will achieve unconditional fulfillment of socialist pledges assumed for 1981 and thereby make their worthy contribution to fulfillment of the tasks of the first year of the 11th Five-Year Plan and the historic decisions of the 26th CPSU Congress and the 20th Congress of the Uzbek Communist Party.

9817

CSO: 1800/706

MAJOR CROP PROGRESS AND WEATHER REPORTING

POOR PREPARATION OF COTTON HARVESTING EQUIPMENT SCORED

Moscow PRAVDA in Russian 31 Aug 81 p 1

[Article by N. Gladkov, Uzbek SSR: "The Hour for the 'White Harvest' Is Near At Hand"]

[Excerpts] The cotton harvesting period is fast approaching in the republics of Central Asia. What preparations are being made for this very important period by the farmers of Uzbekistan -- the country's principal cotton growing zone?

The republic's Ministry of Agriculture has cited many other rayons in which fine preparations are being made for the "white harvest." They include Galabinskiy and Bukinskiy Rayons in Tashkentskaya Oblast, Gzhduvanskiy Rayon in Bukharskaya Oblast and Markhamatskiy Rayon in Andizhanskaya Oblast.

Here, in the opinion of the specialists, a great role was played by the month's campaign (15 July to 15 August) aimed at preparing the cotton harvesting equipment. During this period, for example, repairs were carried out on one fourth of the machines in oblasts which had fallen behind -- Samarkandskaya, Syrdar'inskaya and Dzhizakskaya Oblasts.

However, there are still rayons in the republic where at the present time only 53-70 percent of the equipment has been prepared for operations. The farms in Khorezmskaya Oblast and in the Karakalpakskaya ASSR have fallen behind. True, the harvest work commences somewhat later here than it does in other rayons. But why put off until tomorrow that which can be done today? Yes and there is more than enough time: the machines have been standing idle since November of last year.

Low quality repair work is being tolerated on some farms. At the Moskva Kolkhoz in Gurlenskiy Rayon in Khorezmskaya Oblast, defects were found in one half of the machines inspected. This is the result of weak control and crude violations of the technology for carrying out repairs.

Such facts must be brought to light. At the end of last year, the republic's Ministry of Agriculture conducted a roundtable discussion to which the leaders of leading farms and the best machine operators were invited. During the meeting, many serious complaints were registered regarding the work of the designers and machine builders. The working parts of cotton harvesting machines are breaking

down after only their second year of operation, when in fact they should provide good service for no less than 7 years. The engines and fans require repair work almost annually. As a result of poor quality welding, the hoppers and brackets often come apart. Mention was also made of shortcomings in the designs of the machines. The time has come for the creators of equipment to listen to the comments being made by the machine operators.

The farmers of Uzbekistan have resolved to supply the country with 5.9 million tons of cotton this year. The carrying out of high socialist obligations is greatly dependent upon how well the farms prepare their harvesting equipment.

7026

CSO: 1824/024

MAJOR CROP PROGRESS AND WEATHER REPORTING

TENDING OF COTTON PLANTS, EQUIPMENT PREPARATION IN UZBEK SSR

Moscow SEL'SKAYA ZHIZN' in Russian 22 Aug 81 p 1

[Article by A. Uzilevskiy, Uzbek SSR: "Plantation Work Accelerating"]

[Excerpts] This present summer has been unique. Hurricane winds, showers and hail "attacks" prevailed during June and July. In Romitanskiy Rayon in Bukharskaya Oblast, more than 15,000 residents of kishlak villages and the rayon center went out to furnish assistance to the cotton growers. They pumped water out of the furrows and into irrigation ditches; they restored eroded tracts of land and they replanted thinned out rows.

The Ministry of Agriculture for Uzbekistan analyzes regularly the developmental phases of the cotton plants. By 11 August, an average of 6.1 bolls had accumulated on one plant compared to 6.6 last year. This difference decreased over a 10 day period and at the present time has almost been eliminated entirely. The accumulation of the crop is proceeding more successfully in Surkhandar'inskaya, Dzhizakskaya and Namanganskaya Oblasts. At the same time, this important process has fallen behind somewhat in some rayons in the Zeravshan River Valley and along the lower reaches of the Amu-Dar'ya River.

But the problem is not just simply the number of bolls on a bush. The ripeness of the fibre must be such as to ensure the healthy and earlier opening of the bolls. Unfortunately, the level of ripeness of the bolls is by no means the same. The contrast in their development requires the active continuation of inter-row cultivations.

This was mentioned to the Uzbek farmers by inspection brigades which came from Azerbaijan, Turkmenia and Tadzhikistan. These traditionally competitive friends commented upon the persistent efforts by the Uzbekistan farmers and they also took note of their shortcomings. The delegation of Turkmen cotton growers directed attention to the low quality of the inter-row tillings on a number of farms in the Karshi Steppe region. The representatives from Tadzhikistan advised the Andizhan cotton growers to display concern for those plantings which had fallen behind in their development. Those Azerbaijan cotton growers who visited the Dzhizak Steppe region viewed as unjustified the trend on the part of some leaders and specialists to curtail the tending of the plants.

In the Karakalpakskaya ASSR, the inspection brigades criticized quite properly the cotton growing farms in the northern zone for having fallen behind in the preparation of their harvesting equipment.

The reports issued by the brigades were made available to the farms, the rayon and oblast party committees and the Central Committee of the Communist Party of Uzbekistan. The recommendation was made to have the agricultural organs and the kolkhozes and sovkhozes undertake all of the measures required to correct the shortcomings noted. The decision was made to continue the all-round cultivation of the cotton plants up until the beginning of September and to accumulate an average of 10-12 full-value bolls on each bush. Those plantings which have fallen behind in their development are to be given an increased amount of organic fertilizer and a watering with diluted farmyard manure.

The preparation of the equipment is nearing completion at the present time in the repair workshops. In a majority of the cotton growing rayons, the harvesting machines, automatic cotton loaders, tractor trailers and dust and spray applicators for defoliation are already in position at the readiness line. Approximately 3,200 harvesting-transport detachments have been formed. More than 80,000 driver-mechanics will be employed for double-shift operation of the units. The seasonal workload per machine is 109 tons and yet thousands of machine operators have each resolved to harvest 200-300 tons of cotton during the season. Taking into account the later ripening of the crop, the labor collectives intend to shorten their harvest periods considerably in the interest of obtaining high quality output.

1026

CSO: 1824/024

MAJOR CROP PROGRESS AND WEATHER REPORTING

STATUS OF COTTON HARVEST OPERATIONS IN UZBEK SSR

Moscow SEL'SKAYA ZHIZN' in Russian 1 Oct 81 p 1

[Article by a collective correspondent for SEL'SKAYA ZHIZN', the Editorial Board of the newspaper KISHLOK KHAKIKATI and SEL'SKAYA PRAVDA, Uzbek SSR: 'With the Aid of Machines']

[Text] This year the harvesting of cotton in Uzbekistan is marked by a number of peculiarities. Actually, all phases in the biological development of the cotton were noticeably late in taking place. The cotton growers are presently attempting to make up for lost time and to harvest their crop in a manner such that no time will be lost in preparing the fields for the future crop.

A great amount of work has already been carried out. In particular, the defoliation was conducted in a more organized manner than has formerly been the case. In such oblasts as Tashkentskaya, Syrdar'inskaya and Bukharskaya Oblasts, this work required only 8-12 days. This made it possible to move the cotton harvesting machines out onto the fields during the best periods.

The defoliation is being carried out using the most efficient means and methods. For example, of 170,000 hectares in Tashkentskaya Oblast, more than 100,000 were worked using the ground method. For the republic as a whole, an increase of more than four times took place in the areas treated with the low-toxicity UDM preparation. It was employed in Syrdar'inskaya and Bukharskaya Oblasts on almost one half of the cotton plantations. In those rayons where the defoliation was carried out on schedule and in a high quality manner, the raw cotton delivered to the procurement points was distinguished by a lesser degree of contamination than has been the case in past years.

For the first year of the five-year plan, the republic's farmers resolved to supply the homeland with no less than 5.9 million tons of cotton, including 400,000-420,000 tons of fine-fibred cotton. Thus, during the harvest work a maximum amount of emphasis will be placed upon the equipment to be used for gathering up more than 4 million tons of the "white gold" from the fields. There are in operation at the kolkhozes and sovkhoses approximately 35,000 cotton harvesting machines and almost 100,000 tractor trailers -- for use in delivering bulk cotton to the receiving points. In Tashkentskaya, Namanganskaya and Syrdar'inskaya Oblasts, the raw cotton has been unloaded from the hoppers of more than one half

of the vehicles. For the republic as a whole, they constitute more than one third of the daily yield being obtained.

The Central Committee of the Communist Party of Uzbekistan and the oblast and rayon party committees are undertaking energetic measures aimed at ensuring that each hour of time during the autumn months is utilized in an efficient manner for harvesting the crops. The cotton growers are receiving assistance from workers attached to industrial enterprises and construction projects and from the residents of cities and rayon centers.

The cotton is being moved in from the fields for the most part by means of specialized transport vehicles. The procurement points at Madaniyat in Pakhtaabadskiy Rayon and Kushchi in Markhamatskiy Rayon are initially passing the machine harvested cotton through cleaning and drying shops and thereafter it is being made up into bales.

One of the chief tasks is that of achieving maximum improvements in the quality indicators. The brigade method for accepting raw cotton at the procurement points, an innovation last year, was employed mainly in Tashkentskaya Oblast. This year, this method of acceptance has been introduced into operations at 61 cotton plants and 124 points, with the cotton being procured from 3,536 brigades.

The overwhelming majority of the procurement points are well prepared for accepting the new crop. However, as yet not all of the cleaning and drying shops have been made ready for the work. The course of the harvest operations reveals that the transport field wagons are not being utilized efficiently in all areas and that at times portions of the crop are being deposited at unprepared sites. Incidents have occurred wherein the cotton has been transported from the fields to the procurement points in a non-rhythmic manner.

The operational tempo out on the republic's fields is increasing with each passing day and greater quantities of equipment are being moved out onto the fields. The harvesting operations which began in the south -- in Surkhandar'inskaya and Khorez'mskaya Oblasts -- have already progressed into the Fergana Valley, the lower expanses in the Syr-Dar'ya River and Dzhizak regions and finally along the lower reaches of the Amu-Dar'ya River. The members of kolkhozes and sovkhoz workers, party and soviet activists and the specialists, all who live and work in Uzbekistan, are confident that the crop will be harvested completely and that all obligations will be fulfilled.

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CSO: 1824 /024

MAJOR CROP PROGRESS AND WEATHER REPORTING

POTATO HARVEST PROGRESS REVIEW

Moscow IZVESTIYA in Russian 11 Sep 81 p 1

[Article prepared by P. Voroshilov, I. Kasyukov, P. Matukovskiy, O. Pavlov and S. Fonarev: "Potatoes: To Harvest Them Quickly, Without Losses, To Provide Reliable Storage"]

[Text] Recently, early potatoes have been harvested and delivered to the union fund. They occupy incomparably small areas compared to the late ones, which we shall have on the table in the fall, and will not undergo extended storage. At the present time basic harvesting work is getting underway on the country's potato fields.

They are extensive--in excess of 3 million hectares--the largest in the world. The harvesting of potatoes is labor-intensive work; it is complicated by the fact that it frequently takes place during bad weather. This year the digging of potatoes in the chief regions of commodity production--the Russian Federation, the Ukraine, Belorussia and the Baltic region--was started somewhat earlier than usual and in tolerable weather. By the beginning of this week potatoes had been harvested from 411,000 hectares or 13 percent of the plantings. But this should not make one complacent. The peculiarities of the year require that the harvesting be done as quickly as possible, with prevention of losses and the preservation of all that has been grown. The duty of farmers, cooperative society members, subdivisions of the USSR Ministry of Fruit and Vegetable Industry is to efficiently carry out procurement and to ensure the systematic shipment of potatoes to the all-union fund.

Minsk

In Belorussia, the objective is to complete the harvesting by 25 September and procurement no later than 10 October.

The republic's potato fields at kolkhozes and sovkhoses exceed 378,000 hectares, and you can add about half a million hectares on private plots. Belorussian breeders have developed excellent strains, such as Temp, which has become the standard, Start, Loshitskiy and others. They provide a stable harvest; their tubers contain a large amount of starch.

Belorussia's share of the country's gross harvest of potatoes is 17-18 percent. And this year it should sell to the state no less than 1,900,000 tons of tubers from public fields and, tentatively, 300,000 tons from private plots. The drought did damage to the "second bread"; nonetheless, the grown harvest is not bad. Many farms are gathering 200 and even more quintals. The average yield, for example, in Minskiy Rayon amounts to 179 quintals.

The republic's party, soviet and operational organs in advance took all measures so that not a single tuber would remain and the entire harvest would be taken in before the first autumnal frosts, which this year are being anticipated earlier than usual. Long before the start of the harvest, 12,800 potato harvesting combines and 15,000 potato diggers and 4,500 sorting stations were carefully prepared. This year many small tubers are expected. To prevent them from being lost, an innovation is being widely disseminated throughout the republic, which had been proposed and successfully tested by Gomel'skaya Oblast machine operators. Here at Uvarpovich Sovkhoz of Buda-Koshelevskiy Rayon, to put on worn hoses of milking machines on the transporter rods of potato harvesting machines. This reduced the openings through which the tubers might drop out together with the dirt. It has been estimated that the proposal of these able people would make it possible to save 40-60 quintals of potatoes on each hectare.

Special attention is being devoted to harvesting after the machines. The fields will be replowed. As shown by practice of recent years, each replowed hectare yields an additional 2-3 quintals of tubers.

In order to prevent losses, control digging is carried out everywhere. Specialists determine the biological yield and on this basis adjust the harvesting machines and pass on assignments for machine operators. Maximum preservation of the harvest constitutes the deciding factor in determination of the material remuneration in machine harvesting.

The first harvesting days showed that machine operators for the most part did a good job of preparation for it. In Khoynikskiy Rayon of Gomel'skaya Oblast, combine operators I. Logvinets and I. Golen' of Sudkov Sovkhoz are outstanding because of high production and good quality of harvesting. They are masters of their job, but they will not fail to say that their results owe a great deal to good preparatory preparation of fields for harvesting. This means that the leafy tops are cut down in time and routes for movement of the equipment are clearly marked out.

Incidentally, speaking of the tops. They constitute an important reserve for adding to fodder stocks. While a quintal of tubers equals 35 fodder units and about 2 kilograms of digested protein, a quintal of the tops equals 12.2 quintals of fodder units and 1.6 kilograms of protein. For this reason the republic's farms try to procure as much as possible of the tops.

Kemerovo

On the largest potato fields of Western Siberia, the early varieties have already been harvested.

Many adversities have fallen to the lot of Siberian potatoes. In the steppe zone of Kemerovskaya Oblast, a considerable portion of productive moisture was taken by lingering June hot dry winds; then it was hit unexpectedly by frosts. The second half of August, when the crop is actively formed, turned out to be hot and sunny. Still, as the specialists of the oblast administration of agriculture believe, the set targets for procurement of potatoes will be somewhat overfulfilled. The possibility exists of timely and complete fulfillment of cooperative deliveries.

The potatogrowers have faced their difficulties with experience and effort as well as the markedly grown equipment stocks on the farms. On all the seed plots, such Siberian varieties as Priobskiy and Kemerovskiy have firmly withstood the unfavorable weather.

Irrigated land on Beregovoy Sovkhoz is being used to provide a big yield. In the northeastern rayons of the oblast--Tisul'skiy, Mariinskiy and Izhmorskiy, which are located in taiga zones, the "second bread" yield was not bad. Control digging shows that each hectare should yield in excess of 100 quintals of tubers. This will make it possible to make up for losses in other rayons incurred because of the drought. The oblast has an additional significant reserve. This spring, individual kitchen gardens and plots were expanded to 52,300 hectares. The land for them was selected in suburban zones and was plowed early. Enterprises provided the necessary transport, for which reason the planting was done in an organized manner in reduced time. Mineral fertilizers were sold at all consumer-cooperative farm stores. For this reason it would be a crime to complain about the yield. As a result, there is a double benefit--many families have enough potatoes for their personal needs for the winter, while the surpluses, which added up to 50,000 tons, are sold through receiving centers of consumer cooperatives.

Mass harvesting of potatoes begins in the oblast as a rule in the middle of September. So far only the early potatoes have been collected. About 6,000 tons have been sold to public dining enterprises and the trade network. Preparatory work is so arranged as to have most tubers harvested by machines. This, as is convincingly shown by past experience, aids not only in significantly reducing labor outlays but also in additionally obtaining from each hectare 20-25 quintals of the produce.

Right now there are on the ready line 708 potato harvesting combines and 723 diggers. With the aid of sponsors, the equipment has been fully provided with machine operators. Production collectives and student detachments will help in selection, sorting and transporting of the tubers. Storehouses are ready to receive the crop.

But, in our opinion, the neatly organized harvesting conveyor has a weak link. Because of the weather, traditional work periods had to be shifted. Many farms today are engaged in putting up corn and sunflower for silage and are continuing to accumulate coarse fodder; the aftercrop is growing, and it has to be cut. As a result the tractor pool has been engaged longer than usual in fodder procurement brigades. And who is going to attach potato combines? Problems have not yet been fully

resolved of transporting the harvest; container loads are in the fields. But time does not allow for lingering. The job is not to lose a single grown tuber, to harvest all the potatoes in an optimal time period and then to prevent them from spoiling while in storage.

Leningrad

Valuable experience has been accumulated in the job contract plus bonus system. City dwellers stand together with the farmers.

The tractor-trailer train removed from the fields of Leningrad Lyuban' Sovkhoz potatoes that had been gathered from a second dig. From the first days of harvesting work, it became a rule here not to consider the furrows harvested as long as a single tuber remained in the ground.

"While previously we failed to collect from such a harvest as this, which averages 200 quintals, something like two-three quintals from each hectare, we considered it inevitable," says sovkhos director A. Aleksandrov. "A new approach to the work helped eliminate these losses. Potatogrowers were shifted to the job contract plus bonus system of wages. Now they are responsible for carrying out the entire technological cycle--from planting to harvesting of the potatoes."

The sovkhos has 18 combines, which the machine operators use throughout the entire daylight hours; they do not harvest the potatoes with the non-stop method but selectively; such a technology requires maneuvering of equipment, but it permits getting a maximal harvesting of the "second bread." Field routes are planned by a special commission, which determines on a scientific basis the sector where the potatoes are completely ready for harvesting. At the same time, the yield per hectare is determined, which serves as a criterion in evaluating the quality of labor of potatogrowers.

The detachments ride to the fields in any weather; they have been helped in this by the sovkhos's innovators. On the basis of their proposal, devices have been created which permit where necessary to "harness" a second tractor to the combine. With enhanced traction, the harvesting tempo remains high even in sticky soil. Furthermore, cultivators do postharvest work on the fields so as to make it possible to gather the crop to the last tuber.

Sovkhos economists have worked out a system of compensation for conducting the harvesting work in an outstanding manner; the potatogrowers have adopted joint socialist commitments with the transportation workers who bring the crop from the fields to sorting stations and with patron workers and students go through and grade the tubers by size and then send them in containers to storehouses. A common interest in end results made it possible to save much produce, which in the past was spoiled in loading and transportation.

All this has made it possible for the Lyuban' farmers to adopt increased commitments --to sell 700 tons of potatoes in excess of plan.

These days the weather is not spoiling farmers, but precisely according to the two-shift schedule more than a thousand combines and other harvesting units are going

out into the fields. Routes from the fields to receiving bases were laid out by Leningrad motorists in coordination with detachments and links in the form of a schedule.

At the present time, the oblast's farms have taken in a harvest of potatoes of almost 7,000 hectares; 50,000 tons of select tubers have been turned over to the state. This is considerably more than in the same period last year. It is important for new mechanized storehouses with a total capacity of 50,000 tons to become operational both in the city and in the oblast.

Vilnius

In Lithuania, work is proceeding in an organized manner and at a good tempo.

In Lithuanian SSR a total of almost 140,000 hectares were planted with potatoes. True, this is somewhat less than, say, six years ago. But they are striving to make up for the reduction of area by growth in yield. This year, for example, the farms of many rayons are getting from a hundred hectares about as many tubers as were harvested in 1975 from 130 hectares.

In Lithuania, harvesting of potatoes began everywhere toward the end of August. There is every basis for thinking that it will be completed earlier than usual. The conditions for this are favorable: the grain fields stand harvested, the straw has been gathered, and it can be said for the entire area that the plowing of areas set aside for sowing of winter crops was completed three weeks ago. It is quite important that the first days of September have not been endowed with precipitation.

They have reported at the republic's Ministry of Agriculture that 1,400 potato harvesting combines and more than 5,000 diggers have gone to the potato plantings, and 5,000 trucks and tractor trailers are being used for transporting the tubers; significant help is being provided by city people. We note that since the start of the harvest work more than 15,000 tons of potatoes have already been transported to the trade network of cities and worker settlements and procurement stations of the republic--this is fivefold more than at the same time last year. Several trainloads of potatoes have been sent to Moscow and other industrial centers.

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MAJOR CROP PROGRESS AND WEATHER REPORTING

PROGRESS, PROBLEMS OF POTATO HARVESTING WORK IN BELORUSSIA, RSFSR

Harvest Situation

Minsk SEL'SKAYA GAZETA in Russian 18 Sep 81 p 1

[Excerpts] For farmers in the republic, the harvesting of potatoes is the chief and most responsible work these September days. Here, as in grain harvesting, the success of the work is decided by maximal organization, precision of all elements of the harvesting conveyor and able placement of people. A zealous and carefully thought out work as to details on the potato fields distinguishes the farmers of the better farms of the republic.

Nonetheless the harvest situation in the republic as a whole is such as to merit concern. Work has been going on for more than two weeks on potato plantations, but less than half have been harvested. Serious lags are to be found in Mogilevskaya, Vitebskaya, Grodnenskaya and Gomel'skaya oblasts, where 30 to 42 percent of the potatoes have been dug up and daily growth of harvested areas is significantly below average republic indicators. This year there can be no complaints about bad weather and a late harvest as harvest work conditions are good. Yet only 13,000 hectares instead of the planned 20,000 are being harvested in the republic in one day. For purposes of comparison, let us take last year's figures. At that time, under conditions of bad weather, increase in harvested areas on the average amounted to 3.5 percent, this year--2.5 percent. What are the reasons for the lag? They are not hard to find. Almost half of the combine pool--approximately 6,000 machines--are out of operation and not included in the work. This indicator is particularly high in Grodnenskaya Oblast, where only 41 percent of the available machines are being used.

Recently, the Central Committee of the Communist Party of Belorussia gave its most serious attention to the tempo and quality of harvesting of potatoes, vegetables and fruits, their deliveries to consumers, the creation of seed stocks and organization of preservation of the collected harvest. The questions put by the Central Committee and the outlined ways and concrete measures for overcoming the lag remain as the chief directions in the work for the entire period of fall harvesting.

Today each second person working in the potato fields is a city dweller. The success of the harvest depends significantly on how his labor, rest and feeding are organized. Many examples are to be found of highly productive, businesslike and concrete aid of urban envoys to the countryside. Unfortunately, many cases exist to

the contrary. The pupils of Novomyshkoye Agricultural Vocational School No 20 are harvesting potatoes at Iskra Sovkhoz of Baranovichskiy Rayon. Their work is not organized, and downtime of equipment is most excessive. As a result, daily output is low, and tens of young people, who came to the country with the best of intentions, are in a bad mood.

The lagging tempo of harvesting work is holding back processing of the crop and its placement in storage. Speeding up of this work without forgetting about quality is the primary obligation of party organizations, farm heads and specialists in the immediate days ahead.

The potato fields of the republic are very large, occupying in excess of 375,000 hectares. Belorussian potatoes amount to one-sixth of the all-union crop of tubers. Accordingly, deliveries to union stocks and the size of sales of potatoes to the state are significant. The farms of Minskaya Oblast delivered the entire plan—15,000 tons—in a short time to Moscow. The shipment of tubers to Leningrad and the regions of the North is continuing; procurement of potatoes goes on.

"In agriculture as in no other sector, the results of the year depend on how the work is organized in the final stage." These words of Comrade L.I. Brezhnev could not possibly define more fully the responsibility of farms for quality harvesting and preservation of the grown harvest. Today thousands of people stand on the front line of harvesting work, and each one's role is inestimable. Success comes only to those farms where the entire collective—machine operators, field-workers, transport workers, auxiliary workers and the people sent from the city—work with precision and organization.

Report from Bryanskaya Oblast

Moscow SEL'SKAYA ZHIZN' in Russian 20 Sep 81 p 1

[Excerpts] Today the oblast has about 5,000 potato harvesting combines. Specialists are considering whether to use them at full capacity, in which case the entire harvest from an area of almost 117,000 hectares could be taken in solely with the combines in 20 workdays.

New contributions help potatogrowers offset the unfavorable weather. During the 10th Five-Year Plan, the marketability of the sector was significantly expanded. The state annually received from Bryanskaya Oblast farms hundreds of thousands of tons of tubers. Of course, difficulties were not surmounted everywhere; there are still kolkhozes and sovkhoses where they take in fewer than 80 quintals of tubers per hectare. But an efficient complex program is already in operation to overcome this lag.

Today there stand out such clearly defined "potato" rayons as Klimovskiy, Novozybkovskiy, Pogarskiy, Starodubskiy, Trubchevskiy, Klintsovskiy, Krasnogorskiy and Sevskiy. Altogether, the potato plantations occupy in them more than 73,000 hectares. The prospects are for large potatogrowing farms.

One of the important directions in the development of a potato farm is the further improvement of the system of seedgrowing. A policy has been adopted to sharply expand within the structure of potato plantings early, medium-early and also midseason ripening varieties. By 1985 they will occupy 85 percent of the oblast's potato

plantings. What will this do? Take Novosybkovskiy Rayon as an example. This year there were more plantings of such varieties than last year, and the farms took in as early as in August a crop of tubers from an area of 800 hectares. This is almost 10 percent of all plantings. In this way they ensured the fulfillment of the plan for deliveries of early potatoes.

While aiming at early- and medium-ripening varieties, potatogrowers "take" those from them that are most intensive. For example, almost everywhere in the oblast they have rejected the recently widely prevalent but low-productive variety Priyekul'skiy Ranniy. It is being replaced by such early ripening varieties as Domodelovskiy, Detskosel'skiy, Lyuberetskiy, Druzhnyy, Nevskiy and Prigozhiy-2, which produce a yield that is 1.5 to 2 times more productive.

A major role in the formation of this year's crop has been played by the able solution of operational questions. The Ipatov method of use of equipment adopted on most farms has also been helpful in this. In the potato fields there is being increasingly clearly displayed the union of practice with research institutions. In particular, scientific workers of the affiliate of the Scientific-Research Institute of Potato Farming analyzed last year's work of the collectives of potato-harvesting complexes and detachment in several rayons. The conclusion was as follows: thanks to the Ipatov method, labor productivity on many of the oblast's farms increased 15-20 percent in digging, worktime losses were reduced 1.5-fold due to organizational and technological reasons, while transport requirements were reduced 10-15 percent. A number of measures have been proposed for eliminating blunders in harvesting organization. What in particular? For example, the necessary attention is not paid on certain farms to the link for preparing fields for digging. Sometimes it exists only on paper. Yet such links help boost labor productivity by 20 and more percent. On leading kolkhozes and sovkhoses, these units begin work 10-14 days before the start of mass digging, removing the tops, removing the crop from headlands and also preparing parking spaces for the combines.

Recommendations of scientists are being used in the practical work of potatogrowers.

Today potato digging is led by the farms of Klimovskiy Rayon. The potatogrowers of Novosybkovskiy and Kletnyanskiy rayons are actively engaged in the harvest work. Labor productivity of harvesting complexes and detachments in many other rayons is growing from day to day.

The farmers of the oblast have been set the task of taking in the tubers on the entire area, including secondary picking up of them after replowing of the potato planting area, by 5 October.

Harvest News from Kaluzhskaya Oblast

Moscow SEL'SKAYA ZHIZN' in Russian 11 Sep 81 p 1

[Excerpts] Mass harvesting of potatoes is in progress in all of Kaluzhskaya Oblast. Special attention is being paid to quality of work and the struggle against losses.

The farms of Kuybyshevskiy Rayon are harvesting potatoes at a fast tempo. "We have dug up potatoes from 230 hectares," Aleksandr Mikhaylovich Mayorov, party

raykom secretary, shows a recent report. "We have already sent the first 2,300 tons of tubers to Moscow, Noril'sk, Astrakhan' and other cities."

The potato fields in Kuybyshevskiy Rayon take up 3,750 hectares. Kolkhoz and sovkhos agronomers have carefully appraised the crop, determined field-harvesting priorities. This year the plants have been developing unevenly: on some fields the tops have become dry, on others they are still green, while the tubers, obtaining moisture, are gaining in weight. Harvest strategy has consequently been worked out so that the fields with dry tops are harvested first.

The chief reliance is on combines, of which there are 74 on the farms. All of them have been overhauled and checked out. Hermetic sealing was carried out on the example of Belousovskiy. At Butchinskii Sovkhoz, extra rods have been added to transporters. Potatoes on this farm began to be harvested a long time ago, as the sovkhos sells at an early period a significant portion of the tubers. Today, with 1,100 tons planned, more than 550 tons have already been sent off. Special consideration is given to seed plots, where mother seed stock and the first reproduction of Detskosel'skiy and Kristall varieties are grown.

In Dzerzhinskii Rayon, spaces and capital facilities have been prepared for storage of seed potatoes. A number of new potato storehouses are going into operation, and already half of the seed fund will be under a roof during the winter. But it should be said that many tubers will have to be covered over in pits. Farms are saving up peat for this purpose, which will make it possible to reduce straw outlays.

A large quantity of potatoes can be bought from the population. And there where this work is well organized, tens of tons of tubers have been additionally procured. In Kuybyshevskiy Rayon, they are counting on purchasing in this way 3,000 tons of potatoes. A third of these tubers have already been acquired. At Zakrutovskiy Sel'soviet, 227 tons of select tubers have already been purchased.

The present concern of Kaluzhskaya Oblast farmers is to harvest and preserve the entire crop of grown potatoes.

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MAJOR CROP PROGRESS AND WEATHER REPORTING

BRIEFS

COTTON HARVEST APPROACHES--Fergana--Only a month remains before the commencement of the cotton harvest and the farms in the Fergana Valley have already completed forming up their harvesting-transport detachments. All of the crews have been staffed for double-shift operations. This became possible as a result of the intensified training of machine operators on all of the farms, in the subunits of Goskomsel'khoztekhnika and at professional-technical schools. [Text] [Moscow TRUD in Russian 12 Aug 81 p 2] 7026

NEW TECHNOLOGY EMPLOYED--Fergana--The chopping of cotton has been completed in the Fergana Valley. For the very first time, this agrotechnical operation was employed on the entire area -- more than 400,000 hectares -- using a new technology recommended by the All-Union Scientific Research Institute of Cotton Growing. The units, equipped with vertical and horizontal blades, cut off not only the tops of each bush but also the excess side branches. [Text] [Moscow TRUD in Russian 18 Aug 81 p 1] 7026

FINE COTTON CROP--The farmers in Surkhandar'inskaya Oblast were the first in Uzbekistan to move their "blue ships" out onto the cotton plantations. Here the machine operators in Sherabadskiy, Gagarinskiy and Leninyul'skiy Rayons are harvesting their crops at a maximum tempo. "This present harvest campaign is a special one for us" stated the 1st Secretary of the Surkhandar'inskaya Oblast Committee of the Communist Party of Uzbekistan and Deputy to the USSR Supreme Soviet A. Karimov, "Notwithstanding difficult weather conditions, the cotton field workers have developed a fine crop. Distinct from previous years, special attention was given to the cultivation of fine-fibred cotton this year. [Text] [Moscow TRUD in Russian 12 Aug 81 p 2] 7026

EFFICIENT EQUIPMENT USAGE--Tashkent--The machine operators of Uzbekistan are utilizing their cotton harvesting equipment in an efficient manner. On many farms the units have been staffed with interchangeable crews and are being operated 18 hours daily. [Text] [Moscow GUDOK in Russian 4 Oct 81 p 1] 7026

UZBEKISTAN COTTON PLAN--Uzbekistan--For the first year of the five-year plan, the republic's farmers have resolved to supply the homeland with no less than 5.9 million tons of cotton. The harvest tempo is increasing with each passing day. [Text] [Moscow PRAVDA in Russian 23 Sep 81 p 1] 7026

COTTON CHOPPING OPERATIONS--Tashkent--The chopping of the plants has commenced on the cotton fields of Uzbekistan. This is an important agrotechnical operation that promotes the intensified development of the bolls. On each farm, a detailed planning chart has been prepared for the fields; it indicates the period for carrying out the chopping work on a particular sector. This step-by-step schedule makes it possible to utilize the equipment efficiently. The chopping of the cotton has already been carried out on an area in excess of 300,000 hectares. [Text] [Moscow TRUD in Russian 25 Jul 81 p 1] 7026

POTATO HARVESTING--Kaluga. Mass harvesting of the "second bread" is gathering momentum on the potato fields of Kaluzhskaya Oblast. Potato digging is primarily done with combines. The farms immediately send the potatoes for sale to the state. Kaluzhskiy Party Obkom organized an oblast seminar on problems of organized harvesting of potatoes under conditions of the present weather. The combines were reequipped for work under conditions of higher soil density, preventing possible losses of small tubers. "We shall not leave a single tuber in the ground"--such is the slogan used by mechanized links. [Text] [Moscow EKONOMICHESKAYA GAZETA in Russian No 38, Sep 81 p 19] 7697

POTATO HARVESTING COMPETITION--Bryansk. A competition of potatogrowers to harvest a thousand tons of tubers for the season has been launched in the oblast. A total of 450 harvesting-transport complexes are operating in the fields. [Text] [Moscow TRUD in Russian 25 Sep 81 p 1] 7697

MASS POTATO HARVESTING--Kirov. The oblast's farms have started mass harvesting of potatoes. A total of 329 harvesting-transport complexes and detachments are at work. They have to dig up potatoes from 50,000 hectares. In the first days of the harvesting work, the potatogrowers launched a competition for high-quality harvesting. The machine operators carefully hermetically sealed their machines. The remodeled combines pick at one time tubers from four rows. [Text] [Moscow GUDOK in Russian 13 Sep 81 p 1] 7697

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REGIONAL DEVELOPMENT

USSR LAND RECLAMATION PROGRESS, PROSPECTS

Moscow EKONOMIKA SEL'SKOGO KHOZYAYSTVA in Russian No 9, Sep 81 pp 3-12

[Article by N. Vasil'yev, USSR Minister of Reclamation and Water Management under rubric "CPSU Agrarian Policy in Action"]

[Text] The 26th CPSU Congress, having defined the highest goal of our party's economic strategy -- the steady rise in the nation's material and cultural standard of living -- pointed out specific paths for achieving that goal on the basis of the socioeconomic progress in all branches of the national economy and the continuation of the course aimed at the complete intensification of agricultural production and the consistent increase in the production of foodstuffs and raw materials for industry.

The chief trends in the intensification of agriculture include, in addition to comprehensive mechanization and chemicalization, land reclamation. "In the broad development of reclamation," Comrade L. I. Brezhnev remarked, "lies the future of our agriculture" (L. I. Brezhnev, *Leniniskim kursom* [On Lenin's Course], Moscow, Politizdat, 1972, Vol 3, p 88).

A broad program for land reclamation, for increasing the efficiency of agriculture, and, on that basis, increasing the harvest yield of agricultural crops was developed and adopted by the May 1966 Plenum of the CPSU Central Committee. Emphasizing the tremendous national importance of the major steps involved in land reclamation, Comrade L. I. Brezhnev remarked that that program was one of the important components of building the material-technical base of communism (L. I. Brezhnev, *Leninskim kursom*, Moscow, Politizdat, 1970, Vol 1, pp 411, 413).

During the years when the proposed program was being carried out there was a constant increase in the areas occupied by irrigated and drained agricultural land -- agriculture's gold fund (millions of hectares):

Type of land	1965	1970	1975	1980
Irrigated	9.5	10.8	14.2	17.2
Drained	5.8	7.4	10.1	12.6
Total	15.3	18.2	24.3	29.8

Reclamation extended to practically all the country's zones, from the far south to the northern limits of agriculture, from the Baltic and Belorussia to the Far

East, and there is not a single oblast or kray in which various operations have not been carried out to achieve the fundamental improvement of the land for agricultural use.

Irrigation was carried out on a broad scale in new regions of sprinkler-type agriculture. In the European part of the USSR, over the period of the past three five-year plans the area of irrigated land increased from 2 to 7.4 million hectares. The production of feeds and fodders on that land increased from 1.1 to 11.3 million tons of fodder units; and grain, from 1 to 5.4 million tons, including rice from 0.3 to 1.6 million tons, and corn from 0.2 to 1 million tons.

Irrigation developed at especially high rates in the Volga area. In 1965, 134,000 hectares of land were irrigated there with small-scale primitive systems. The construction of modern large-scale irrigation systems with powerful pumping stations and a covered irrigation network in pipes, together with the application of highly productive sprinkling machines, made it possible to increase the areas of irrigated land to 1.4 million hectares and to create large areas for guaranteed production of agricultural output.

In the most arid zone along the Volga, the total increase in production of output in vegetable-growing and the 50% increase in the volume of feeds and fodders were obtained on irrigated land. At the present time not only individual farms, but entire rayons in the Volga area, have a stable fodder base irrespective of the weather conditions.

The Northern Caucasus became a major region for irrigated agriculture, with the total amount of irrigated land reaching 1.8 million hectares in 1980.

More than 100,000 hectares of irrigated land per year were activated during the years of the Tenth Five-Year Plan in the Ukraine, and the total area of that land during the past three five-year plans quadrupled and exceeded 2 million hectares. On the basis of irrigation the fodder base of a number of oblasts in the republic was strengthened and there was an increase in the production of meat, milk, and vegetables.

Modern reclamation systems were constructed in the Far East. In Primorskiy Kray a number of rice-growing sovkhozes were organized.

Simultaneously there was a buildup in the volumes of large-scale and highly effective operations in the traditional regions of irrigated agriculture -- Central Asia, the Trans-Caucasus, and Kazakhstan. In those regions the irrigated areas increased by 2.1 million hectares, and major operations were carried out to achieve the technical improvement of old systems and to increase the amount of water provided to them, and these measures made it possible basically to eliminate the lack of water that for centuries had hampered agriculture there. As a result, from 1966 through 1980 the production of cotton increased by a factor of 1.7; grain and vegetables, 3; rice, 6; corn grain, 9; and fruits, grapes, and coarse and succulent fodders, a factor of 3.

Special attention was devoted to the development of reclamation in the Nonchernozem Zone of the RSFSR. During the years of the Tenth Five-Year Plan, reclamation work

was carried out here on an area of more than 3 million hectares; approximately one million hectares of drained land and 356,000 hectares of irrigated land were activated; and industrial-crop operations were carried out on an area of 1.9 million hectares.

Operations to drain the land were carried out at high rates in the Baltic republics and in the Ukrainian and Belorussian Poles'ye. There the reclaimed land constitutes approximately one-third of the total agricultural land and is the basis of intensive agriculture.

Projects are being carried out on a planned basis and on a large scale to achieve the technical improvement and modernization of previously construction irrigation and drainage systems, the lining of canals, the construction of collection and drainage network, and the capital planning of the fields. All this makes it possible to decrease filtration and to economize the irrigation water, to prevent the salinization and swamping of the land, to achieve the better regulation of the air and water conditions, and, in the final analysis, to create the optimal conditions for plant growth and development and for growing large harvests.

The volumes of operations involved in the technical improvement of the reclamation systems are characterized by the following indicators (millions of hectares):

<u>Reclamation operations</u>	<u>1966- 1970</u>	<u>1971- 1975</u>	<u>1976- 1980</u>	<u>1966- 1980</u>
Modernization and increasing of the amount of water provided to the irrigation systems	1.67	2.66	3.11	7.44
Construction of collection-drainage network on irrigated land	1.05	1.79	1.34	4.18
Capital planning of irrigated land	0.80	1.14	1.20	3.14
Modernization of drainage systems	1.41	0.95	0.86	3.22

Although large measures to improve the reclaimed state of the land during the past three five-year plans, the following measures are still needed: modernization and reorganization of irrigated land, 3.6 million hectares; increase in amount of water provided to irrigation systems, 1.9 million hectares; capital planning of fields, 2 million hectares; and construction of a collection and drainage network, 1.8 million hectares. It is still necessary to carry out the technical improvement of 31 percent of the reclamation systems (in 1966 more than half -- 56 percent -- of the existing reclamation systems needed technical improvement). At the present time the task lies in constructing systems and machinery that meet the needs of the future.

Thanks to the carrying out of a series of reclamation operations, millions of hectares of relatively unproductive land and fertile swamps and deserts have been converted into highly productive agricultural land: plow land, orchards, vineyards, tea and citrus plantations, meadows, and pastures.

Land reclamation exerts a constantly growing influence upon increasing the production of output in the country's vegetable husbandry. We would like to cite as an

example the results of production of a number of products on irrigated and drained land (millions of tons):

<u>Product</u>	<u>1965</u>	<u>1980</u>	<u>Increase in 1980 as compared with 1965 (increase factor)</u>
Grain	5.0	16.5	3.3
including:			
corn	0.5	3.0	6.0
rice	0.6	2.8	4.7
Cotton	5.7	9.96	1.7
Sugar beets	5.6	7.2	1.3
Vegetables	5.6	12.7	2.3
Feeds and fodders	8.2	42.6	5.2
Fruits	0.5*	1.5	3.0
Grapes	0.9*	2.4	2.7

* Data for 1966

At the present time the country receives 100 percent of the harvest of cotton and rice, 38 percent of the corn grain, 75 percent of the vegetables, 21 percent of the feeds and fodders, and a large quantity of other output from renewed land, and the tendency is such that the role of that land in the formation of the foodstuffs fund will increase constantly.

In the Tenth Five-Year Plan 100 percent of the increase in the production of corn grain, vegetables, and fruits -- not to mention rice and cotton, the cultivation of which is entirely concentrated on irrigated land -- as well as 64 percent of the increase in the production of grapes, 47 percent of feeds and fodders, and 24 percent of grain were obtained from reclaimed land. For 1976-1980 as a whole, the increase in the production of vegetable husbandry on that land on kolkhozes and sovkhozes was 69 percent. In 1980 the irrigated land occupied 10 percent of the agricultural land (not including pastures), and the production of gross output of vegetable husbandry on that land was 34 percent of its total volume.

The effectiveness of the reclamation is attested to by the information in the table.

Output of Vegetable Husbandry Per Hectare of Agricultural Land
in 1976-1980, rubles per hectare

<u>Republic</u>	<u>Agricultural land</u>		
	<u>irrigated</u>	<u>drained</u>	<u>unreclaimed</u>
USSR	792	204	136
RSFSR	460	145	110
Ukrainian SSR	698	283	290
Belorussian SSR	458	213	283
Uzbek SSR	1263	-	84
Kazakh SSR	498	-	66
Georgian SSR	939	964	708
Azerbaijan SSR	836	-	280

[continued on next page]

Lithuanian SSR	698	222	160
Moldavian SSR	1535	-	681
Latvian SSR	652	199	140
Kirgiz SSR	597	-	89
Tadzhik SSR	1391	-	109
Armenian SSR	1091	-	142
Turkmen SSR	921	-	27
Estonian SSR	223	220	203

Every irrigated hectare, on the average for the country, yielded 5.8 times more output than unreclaimed land, and every drained hectare yielded 1.5 times more.

When evaluating these figures, one cannot fail to note that the composition of the output produced, especially on the irrigated land in the republics of Central Asia, the Trans-Caucasus, and in Kazakhstan, differs sharply from the composition of output on the rest of the land. The output of cotton, rice, vegetables, and certain types of production, in terms of value per hectare, is not completely commensurate with the specific value of the output produced on unreclaimed land. Data which is comparable in this regard is that which pertains to the productivity of the land in the RSFSR, Ukrainian SSR, Lithuanian SSR, and Latvian SSR, where there are no differences in the composition of the crops on the reclaimed and the unreclaimed land.

It would be methodologically justified to compare the productivity of the reclaimed and unreclaimed hectare with regard to comparable output and under identical soil and climatic conditions. However, this kind of comparison will intensify even more the advantages of reclamation, since reclamation is carried out on those areas where, otherwise, agriculture either is completely impossible (deserts, semidesert areas, swamps), or the productivity of the land is extremely low (in swamped, water-logged, or arid regions). For example, in the Central Asian republics, and in the south of Kazakhstan, modern highly productive irrigated areas, prior to reclamation, had been pastures with a productivity of 0.8-1.0 quintals of fodder units per hectare. Prior to reclamation, the excessively moistened land produced 5-6 quintals of grain per hectare, or 10-12 quintals of poor-quality hay per hectare.

During the three five-year plans that have elapsed since the May 1966 Plenum of the CPSU Central Committee, the state allocated approximately 75 billion rubles for water-management construction in the USSR. This figure is 8 times higher than the level of capital investments for those purposes during the previous 15 years. The capital investments channeled into reclamation construction are characterized by a high return. During 1976-1979, in terms of one ruble of invested funds, in vegetable husbandry the increase in output as a whole for the USSR was 24 kopecks, including 49 kopecks for reclaimed land; in the RSFSR, respectively, 12 and 42 kopecks; Ukrainian SSR, 25 and 65 kopecks; and Latvian SSR, 11 and 36 kopecks.

On reclaimed land the labor performed by the agriculturists is more productive. For example, on the average in 1978-1979, in terms of one man-hour, the RSFSR produced output of vegetable husbandry on all types of land that was valued at 2.48 rubles, and on reclaimed land, 4.63 rubles; in the Ukrainian SSR, respectively, 2.40 rubles and 3.72 rubles; in Belorussian SSR, 2.12 rubles and 4.31 rubles; in Latvian SSR, 1.89 rubles and 3.96 rubles.

The production of output in vegetable husbandry on irrigated land is distinguished by its comparatively high profitability. The ratio of the average price that had developed in 1976-1979 for a quintal of grain (excluding corn and rice) that was procured by procurement organizations, to the production costs, was, on the average for the year, 137 on kolkhozes and 130 percent on sovkhoses; corn grain, respectively, 163 and 120 percent; rice grain, 154 and 123 percent; sugar beets, 123 and 108 percent; cotton, 136 and 133 percent; and vegetables 126 and 146 percent.

The further improvement in the use of reclaimed land and the increase in the harvest yield of agricultural crops will assure the reduction in the production costs of the output and the increase in the effectiveness of management on the irrigated areas. One must take into consideration the fact that, starting in 1981, the purchase prices for output of vegetable husbandry have been raised. All this will contribute to an increase in the profitability of agricultural production on the reclaimed land and to the reduction of the amount of time required to pay back the capital investments channeled into its development.

From five-year plan to five-year plan the tasks of reclamation have become more complicated, and we have seen the carrying out of a transition to the creation of large-scale, technical improved reclamation systems and hydraulic structures that encompass large areas of land. The Karakumskiy Canal, which gave life to a half-million hectares of previously desert land, has passed the 1000-kilometer marker, and the 400-kilometer-long water artery of the North Crimean Canal has brought back to life 200,000 hectares in the steppes of the Crimea. More than 100,000 hectares of previously fertile floodland area around the Sea of Azov have been converted into a large-scale base for rice-sowing in the Kuban'. One of the most improved irrigation systems is the Kakhovskaya system; when it is completely constructed it will irrigate 750,000 hectares of arid land in the south of the Ukraine, where the Chief Mainline Canal, with a water expenditure of 530 cubic meters per second, is currently operating. More than 300,000 hectares of previously desert land have been assimilated in the Golodnaya Step'; and it is planned to assimilate approximately one million in the Karshinskaya and Dzhizakskaya Step'. The strait has been covered over and the Kara-Bogaz-Gol natural "boiler" has been cut off from the Caspian Sea, thus preserving 6-7 billion cubic meters of water that evaporated here annually. Major reclamation systems are being built in the area along the Volga, in the Northern Caucasus, the Far East, and other parts of the country.

On the basis of reclaimed land, a major region of animal husbandry for meat purposes is being created in the Belorussian Poles'ye, where an area covering 1.6 million hectares is being assimilated.

In these regions, hundreds of new sovkhoses with well-appointed settlements, and new cities and administrative oblasts, such as the Dzhizakskaya and Syrdar'inskaya Oblasts in Uzbek SSR, have been organized on virgin lands.

Modern water-management construction is being carried out on the basis of comprehensive design plans. Simultaneously with the irrigation and drainage systems, various other structures are being created on the farms that are assimilating the reclaimed land: these include production structures, housing, schools, and structures intended for public-health, cultural, and everyday purposes. During the years of the Tenth Five-Year Plan alone, 4.5 million square meters of

housing was constructed for farms on reclaimed land. Funds totalling 3.7 billion rubles were allocated for production and nonproduction construction. The USSR Ministry of Reclamation and Water Management is financing the additional equipping of the activated land on sovkhozes in the virgin lands and on large-scale areas of land.

In a number of oblasts and republics the local agencies, viewing reclamation as the basic source of the increase in agricultural production, are allocating for the additional equipping of the farms that are receiving the reclaimed land, the necessary capital investments. For example, in the Ukrainian SSR during 1976-1980 more than one billion rubles were channeled to meet these purposes. The farms are being provided with additional technology and fertilizers, and are being given additional manpower. This resolution of the question has been yielding good results -- a high return of output from the reclaimed land.

The broad scope and accelerated rates of reclamation operations, the raising of their technical level, the comprehensive nature of construction -- all these things have required the creation, within a short period of time, of a powerful production base of water-management construction and operational organizations, the expansion of their network, the equipping of them with means of mechanization, and the permanent assignment of personnel. The manner in which, during the years of the past three five-year plans, the production base of the water-management organizations has changed, is attested to by the following data:

<u>Indicator</u>	<u>1965</u>	<u>1980</u>	<u>Increase in 1980 as compared with 1965 (increase factor)</u>
Volume of contractual operations executed, billion rubles	1.27	6.22	4.9
Number of primary construction organizations, thousand units	1.2	3.56	3.0
Number of workers, millions of persons	0.33	0.86	2.6
Capacities of enterprises:			
prefabricated reinforced concrete, million cubic meters	1.1	8.7	7.9
machine-repair enterprises, million rubles	62	387	6.2
Pool of basic earth-digging machines, thousand machines	33	101	3.1

The results of the program being carried out in our country for the reclamation of the land evoke in one's memory the prophetic words of F. Engels, "The productive force which is at the disposal of mankind is limitless. The harvest yield of the land can be infinitely increased by the application of capital, labor, and science" (K. Marks [Marx], F. Engel's [Engels], *Soch.* [Works], 2nd edition, Vol 1, p 563). Reclamation measures are the most effective form of increasing the productive force of the land, its fertility, and the harvest yield of agricultural crops.

The basic demand made on reclaimed land is the attainment of the maximum return of output per hectare, the complete use of its productive force. The way in which

this return has increased during the past three five-year plans is attested to by the following data concerning the harvest yield of agricultural crops on irrigated land:

<u>Crops</u>	<u>1965</u>	<u>1980</u>	<u>1980 indicators in percentage of 1965 indicators</u>
Grain crops -- on the average, quintals per hectare	13.8	32.9	239
Rice, quintals per hectare	26.9	41.9	156
Corn for grain, quintals per hectare	22.4	48.5	217
Cotton, quintals per hectare	23.2	31.7	137
Vegetables, quintals per hectare	135.0	177.0	131
Harvested fodders, quintals of fodder units per hectare	21.6	37.3	173

Although the effectiveness of using the irrigated land increased considerably, it is still far from the capabilities of the reclaimed hectare and from the results of sprinkler-type agriculture on the advanced farms in a number of oblasts and republics. For example, with the country's average harvest yield of grain crops of 33 quintals per hectare, more than 2500 kolkhozes and sovkhoses (26 percent of the farms having sowings of these crops on irrigated land) obtained a grain harvest of 40-50 quintals per hectare or more. With the average harvest yield for corn grown for grain of 48.5 quintals per hectare, in Uzbekistan, on the entire area of sowings, the yield obtained was 68 quintals per hectare, and in Samarkandskaya Oblast, 89 quintals per hectare. On many kolkhozes and sovkhoses throughout the country, the harvest of corn grain exceeds 70 quintals per hectare. The countrywide average harvest of hay from perennial grasses was 53 quintals per hectare in 1980, but the amount produced in Uzbekistan was 135 quintals per hectare.

At the same time it must be said that on many kolkhozes and sovkhoses the irrigated land is still being used in an extremely ineffective manner. For example, according to data provided by the USSR TsSU [Central Statistics Administration] for 1979, 18 percent of the farms that grow grain crops on irrigated land produced less than 15 quintals of grain per hectare; 20 percent of the farms produced less than 50 quintals of vegetables per hectare; and 37 percent of the farms produced less than 20 quintals of hay from perennial grasses per hectare.

This situation, unfortunately, still pertains, and it attests to the existence of major reserves for increasing the production of output. One might add to this that annually large areas of reclaimed land are not used, or they are used as unirrigated land. For example, in 1980, for various reasons, 130,000 hectares of irrigated land and 120,000 hectares of drained land remained uncultivated; 1.1 million hectares were not irrigated; 1.8 million hectares were irrigated only once; and only moisture-charging sprinklings were carried out on an area of 390,000 hectares.

At the July 1978 Plenum of the CPSU Central Committee, Comrade L. I. Brezhnev pointed out, "Large amounts of money are invested in reclamation, a rather powerful production base has been created, and personnel have been developed. This gives us the right to demand of the workers in agriculture and water management that there

be a high return of output from the irrigated and drained land" (I. I. Brashnev, *Leninskii kur'son*, Moscow, Politizdat, 1979, Vol 7, p 406).

The incomplete use of the capabilities of the renewed land in a number of places is largely the consequence of shortcomings in construction planning, construction, the dissipation of capital investments, uncomprehensive construction, poor quality of operations, and operations requiring additional work. There is a large number of shortcomings in the operation of reclamation systems: the entire complex of operations involving the technical servicing and repair of the network is not always executed; the schedules for distribution and feeding of the water for irrigation are not always observed; the reclamation network, structures, sprinkling equipment, and pumping stations are not prepared promptly for the vegetation campaign; and insufficient attention is devoted to the economical expenditure of the irrigation water.

On the farms, large areas of irrigated land are occupied by crops involving little intensive labor; a reduced role is assigned to corn, and to repeated and intermediate sowings; small quantities of fertilizers are applied; there is a shortage of special equipment; there are frequent instances of failure to observe the deadlines and norms for irrigation; there is a shortage of sprinkler personnel, sprinkler-truck operators, and machinists to service the pumping stations. The moisture in the soil is not always monitored. All this leads to decreased harvests, and reduces the effectiveness of state capital investments in reclamation and the labor performed by the people in agriculture.

At the 26th CPSU Congress it was emphasized that in the party's agrarian policy in the 1980's there will be an intensification of the attention toward increasing the yield on capital investments and the created capacities, and toward increasing the effectiveness of using the land, especially reclaimed land. That will require the carrying out of a number of measures which, in the final analysis, determine the size of the harvest on reclaimed land.

The decree of the CPSU Central Committee and the USSR Council of Ministers, entitled "The Comprehensive Program for the Development of Land Reclamation in 1981-1985," stipulates the further accelerated development of that branch. This is yet another manifestation of the unceasing concern shown by the party and the government for the expansion of steps aimed at the fundamental improvement of the land for agricultural use.

The state capital investments channeled into the carrying out of a series of reclamation measures in the current five-year plan will exceed 40 billion rubles. It is planned to put into operation, by the use of these investments, 3.6 million hectares of irrigated land and 3.8 million hectares of drained land, and to free 27 million hectares of pasture. Special attention is being given to increasing the effectiveness of using the irrigated and drained land, to reducing the time periods of achieving the planned harvest yield on that land, and to raising the technical level and quality of water-management construction. It is planned to provide for the complete carrying out of operations to reclaim the land and to achieve their agricultural assimilation, to prevent that land's being taken out of circulation, and to carry out steps for the efficient expenditure of water. Major emphasis will be devoted to projects involving the remodeling of the existing reclamation systems, the improvement of water provision, and the elimination of salinization and increased acidity of the soils.

In the nationwide program for reclamation construction in the country, an important role is assigned to the Nonchernozem Zone of the RSFSR. The capital investments channeled into the development of reclamation there will increase by 46 percent, as compared with the Tenth Five-Year Plan (with their average growth by 18 percent for the branch as a whole). Specific assignments for land reclamation and for the development of the production base of the water-management organizations were pointed out in the decree of the CPSU Central Committee and the USSR Council of Ministers concerning the development of the agriculture of the Nonchernozem Zone of the RSFSR in 1981-1985. As Comrade L. I. Brezhnev noted in his report at the 26th CPSU Congress, that task is so complicated and urgent that it should be resolved by the joint efforts of all the republics, and within the shortest possible periods of time. The water-management ministries of the union republics and the main administrations of union subordination have rendered and continue to render a considerable amount of assistance to the Nonchernozem Zone. In 23 oblasts and autonomous republics of the Nonchernozem Zone, water-management construction organizations of all the union republics are carrying out projects involving the reclamation of the land, the construction of sovkhozes, projects in the irrigation industry, roads, housing, and structures intended for cultural and everyday purposes. For example, Uzbek reclamation experts are carrying out the complete construction of new sovkhozes: "Tashkentskiy" and "Druzhba" in Novgorodskaya Oblast; "Uzbekistan" and "Druzhba" in Ivanovskaya Oblast; Kirgiz reclamation specialists, the "Kirgizstan" Sovkhoz in Yaroslavskaya Oblast; Belorussian reclamation specialists, the "Belorusskiy" Sovkhoz in Pskovskaya Oblast; etc.

In the Eleventh Five-Year Plan, 1.5 times more funds have been allocated for the construction of housing and projects intended for public-health, cultural, and everyday needs than in 1976-1980. Herein lies the expression of the party's concern for the vital needs of the production collectives, for raising the standard of living of the workers in agriculture and water management. Thirty-one percent more funds are being allocated for equipping the sovkhozes that are assimilating reclaimed land than were used for these purposes in the Tenth Five-Year Plan. Special attention is being attached to completing the construction of sovkhozes and the transferring of them to agricultural agencies.

In the area of capital construction during the five-year period that has started, the task lies in energetically implementing the instructions expressed by our party's Central Committee concerning the decisive struggle against the dissipation of capital investments, the concentration of those investments in the most important sectors of production and the construction sites scheduled for activation in the next reporting period, and concerning the reduction of the time periods required for the construction of projects, striving for a situation in which every project is activated within the established deadline and is modern in all respects. This will be promoted by the measures carried out in the branch for improving the planning and the improvement of the economic mechanization. In the current year all the construction organizations of the USSR Ministry of Reclamation and Water Management are supposed to be changed over to the new procedure for settlements with customers, and the granting of credit based on the commercial output and uncompleted construction. Next year all the industrial enterprises will be changed over to the planning based on the indicator of net (normative) output, and construction organizations, to the planning of the productivity of labor based on the indicator of the normative (conventionally net) output and wage fund.

The Eleventh Five-Year Plan will become the five-year plan of the serious reinforcement of the capacities of the operational water-management organizations on an industrial basis, which guarantees the precise functioning of the entire complex of engineering services for the operation of reclamation systems. This requirement evolves from the fact that currently the value of the fixed reclamation assets has reached considerably proportions, exceeds 30 billion rubles, there has been a sharp increase in the amount of capital required for reclamation systems, and in the amount of equipment needed to provide them with structures, pumping and power equipment, and electrical-engineering equipment, and this entire management requires a painstaking approach and skilled operation. With regard to the improvement in the operation of reclamation systems, a number of questions of an organizational nature have been resolved, and the material-technical supplying of the repair and operational services is being systematized. In the Eleventh Five-Year Plan it is planned to channel one billion rubles into the creation and development of the production base of the operational organizations, as compared with 355 million rubles in the Tenth Five-Year Plan. This will be a major step in improving the operation of the reclamation systems, and in creating the conditions for the highly effective use of the reclaimed land.

High rates of development are observed in scientific-technical progress in reclamation. Modern reclamation systems, engineering structures, enclosed tubular irrigation and draining network, automation and telecontrol, improved technology -- new wide-angle "Fregat," "Volzhanka," and "Dnepr" sprinkler trucks -- are creating the conditions for the highly productive labor of persons in agriculture.

In the future we shall see the improvement of the sprinkling technology in the direction of increasing the intensity of the artificial rain, the size of the drops, and the duration of the sprinkling closer to the physiological peculiarities of the crops being cultivated, and in the direction of increasing the labor productivity of the sprinkler personnel, and economizing the irrigation water, energy, and metal. A machine that conforms to these conditions is the new and highly improved "Kuban'" with an operating sweep of 800 meters; the machine can irrigate 150-200 hectares per season. It collects water en route from an open canal and operates in the automatic mode. A single operator can service as many as 10 machines. The "Kuban'" uses less electrical energy than the machines that are currently operating in sprinkling, and expends the water economically. During the operation of these machines, there is no longer a need for the construction of subterranean mainlines; this makes it possible to save a considerable quantity of stand pipes. The series production of this machine was organized in 1981.

There will be a substantial increase in the amount of irrigated land that is drained by vertical drainage and the area with lined canals and pipes. There will be an expansion in the use of automation and telecontrol of reclamation systems with the use of electronic-computer technology. It is planned to introduce new irrigation systems in the automated mode of irrigation. Broad production tests are being conducted on new methods of irrigation -- drop-type, synchronous-pulse, and fine-dispersion. Their introduction opens up great opportunities for the sharp reduction in the specific expenditure of water.

Depending upon the hydrogeological and soil conditions and the direction of use for the drained land, use will be made of enclosed drainage, moistening by means of sluices, and, on hard soils, deep loosening.

We shall see the broader and broader introduction into the practice of reclamation construction of laser devices, completely fabricated pumping stations, single-unit immersible electrical pumps, and polymer materials. In the Eleventh Five-Year Plan it is planned to construct horizontal drainage with plastic parts and synthetic protective-filtering material on 2.7 million hectares, and ditchless plastic drainage on 300,000 hectares.

Because of the fact that individual parts of the country are experiencing a shortage of water resources, the decisions of the 26th CPSU Congress provide for the carrying out of preparatory operations to transfer some of the discharge from the northern rivers into the collection area of the Volga River, and also the continuation of scientific and construction-planning projects to transfer some of the discharge from the Siberian rivers to Central Asia and Kazakhstan.

The execution of the reclamation plans means the creation of a foundation for a rich harvest, but highly effective production on the reclaimed land is possible only if there is a well-organized system of agronomic and reclamation measures for regulating the water, air, nutritional, and salt conditions in the soils and an improved technology for cultivating the agricultural crops.

In this regard it has become vitally necessary to develop zonal systems for managing agriculture on irrigated land for each separate oblast, large-scale irrigation system, and each farm.

This kind of land has great opportunities for the programmed growing of harvest: here one of the most important factors in the life of the plants -- the moisture content of the soil -- is not limited, and, moreover, the humidity of the layer of air at the ground level, the microclimate, lend themselves to regulation, especially on land that is irrigated by means of various sprinkler machines. Of course, scientists at the hydrosalination and agricultural institutes and experimental institutions will have to have their say about this. Production awaits specific recommendations and proposals that encompass as a whole the processes of agricultural production.

The role of science in the effective use of the land is undoubtedly great, but nevertheless the efficiency of agriculture, the harvest, are created on the farm itself, by the hands of the practical workers, by their creative approach to the job to be done.

The elimination of the existing shortcomings in the reclamation of the land, the complete increase in the effectiveness of the use of that land, are acquiring especially great importance as one sees an increase in the fund of that valuable land. With the fulfillment of the plans for the Eleventh Five-Year Plan, the overall area of reclaimed land in the country will reach 36 million hectares, and each percentage of increase in productivity on that land is equivalent to additionally produced output valued at 150-170 million rubles.

In the Eleventh Five-Year Plan there will be a considerable increase in the contribution made by reclaimed land to the nationwide fund of foodstuffs and raw-material resources. The chief attention will be concentrated on the taking of all steps to increase the production of grain and fodders, both by expanding the sown areas on irrigated and drained land and by achieving a considerable increase

in the harvest yield of grain and fodder crops. The production of grain on reclaimed land will increase by a factor of approximately 1.5-1.6, primarily corn and rice grain. There exists a capability, in the south of the Russian Federation, the south of the Ukraine and in Moldavia, and in the republics of Central Asia and the Trans-Caucasus, to create a base for the guaranteed production of corn grain, which is acutely needed by the combined-fodder industry. During the five-year period one could, as a minimum, double the gross harvest of corn grain. Rice-growing will receive further development.

In order to increase the production of fodders and reinforce the fodder base, it is planned to increase the harvest yield and expand the sowings of high-protein fodder crops, chiefly alfalfa, clover, lupine, peas, and rape, and to make it a broader practice to use repeated sowings of fodder crops and to create irrigated pastures and hay meadows. In the resolution of the problem of fodder protein, an important role will be played by soy, which it is planned to produce in considerable volume on the irrigated land of the Northern Caucasus, the Trans-Caucasus, the south of the Ukraine, and in Moldavia. Computations show that, on reclaimed land, it should be possible by the end of the five-year plan to increase the production of coarse and succulent fodders by one and a half times as compared with the 1980 level.

The further improvement of the supplying of vegetables to the public will be assured by increasing the production of vegetables on irrigated land.

In cotton-growing, more attention will be paid to raising cotton plants of the most valuable fine-staple varieties. In this regard there has been an increase in the activation of new irrigated land in zones with favorable natural conditions for growing these varieties of cotton.

There will be a considerable expansion of reclamation operations on the territory intended for planting new orchards and vineyards of the industrial type in Krasnodarskiy Kray, in the south of the Ukraine, in Moldavia, Azerbaijan, Georgia, Armenia, and the republics of Central Asia. As a whole the output of vegetable husbandry on reclaimed land will increase in 1985 by 32 percent as compared with the actually achieved 1980 level.

These are the basic results and prospects for reclamation. The decisions of the 26th CPSU Congress which pertain to reclamation open up new horizons for the workers in our country's water management and agriculture, and inspire them to perform further labor exploits.

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VEGETABLE, FRUIT SUPPLY PROBLEMS

Losses, Waste Described

Moscow EKONOMICHESKAYA GAZETA in Russian No 37, Sep 81 p 19

[Article by V. Varavka, EKONOMICHESKAYA GAZETA's own correspondent, Vologodskaya Oblast: "Vegetable Matters. . ."]

[Text] In various cities this problem arises in late spring, and sometimes even considerably earlier. While it had appeared that enough potatoes, cabbage, beets, and carrots had been procured to last until the new harvest, suddenly -- in April or May -- the vegetable stores are empty. Or, rather, all that's left in them is pickles, marinated salads, canned borscht, and similar products.

What conversions do the tubers, heads of cabbage, and root vegetables undergo while en route from the sovkhoz and kolkhoz plantations to the customers? Where, on what sectors of that complicated and difficult journey and -- no less importantly, why -- are such tangible losses formed? How can one, if not eliminate them completely, at least reduce them, cut them to the minimum? That is the question that I would like to discuss, using the example of an oblast that is typical for the large Nonchernozem Zone -- Vologodskaya Oblast.

Losses in Harvesting

A large amount of vegetables and potatoes are grown here by specialized sovkhozes that are situated around industrial centers. The state provides them with a rather large amount of equipment, fertilizers, and other material resources. Using the ever-growing assistance, the collectives of many farms achieved certain successes and have been growing rather good harvests. For example, on the "Krasnaya zvezda" Sovkhoz, a harvest of 300-350 quintals of cabbage per hectare is produced. The potato harvest here is one and a half times larger than that of its neighbors. For the sake of being entirely fair, we should note that, judged on the basis of its operational capabilities, the equipment for the time being far from compensates for the number of working hands which has been reduced in the villages. The potato-harvesting combines have been performing well only on light soils. On clay soils, and also during wet weather, their productivity is low, and a considerable number of tubers is left in the ground. Practically speaking, there has been no mechanization of the harvesting of carrots, beets, and cabbage, for the growing of which rather large areas have been allocated annually.

Under these conditions, however much we want it, we cannot do without the aid of the city dwellers. Many of them take an honest, conscientious attitude to this work and harvest the products of the fields in just as careful a manner as the people who have been farmers for generations. But we must confess that there also have been a large number of instances of negligence, a casual attitude, and irresponsibility, all of which lead to losses.

During the past autumn, and the autumn before that, I happened to make several visits when potatoes and vegetables were being harvested in Cherepovetskiy and Gryazovetskiy Rayons. I remember very well two plots. On one of them, the young men and women were digging potatoes, and on the other they were harvesting cabbages. To be perfectly honest with you, this was being done in a careless, unconscientious manner, as though they had to give a formal report on what had been done. During a random check on every square meter as many as five large potatoes were detected, not to mention the small ones. Tight, already cracked heads of cabbage were being tossed any which way into heaps. Some of the produce was thrown onto the rejects heap and lost.

And yet, with proper grading, as is done on the better farms, the discarded produce after the cabbages had been cut, including some of the stalks, are used as fodder for the livestock in fresh or ensilaged form.

At the present time the quantity of vegetables procured is several tons less than is being produced. Some part of it -- an extremely inconsiderable part -- is used for communal food purposes on the farms; the rest is lost right in the fields themselves. It is also easy to notice that usually the losses are directly proportional to the harvest yield: the higher the harvest, the greater the quantity of various kinds of discarded produce.

Is it possible to reduce these losses, which are the very first ones? Without a doubt, and it is not really so complicated to do this if one introduces everywhere the strictest control on the quality of the harvesting. The senior person in the group -- representative of the plant, factory, construction project, educational or other institution -- should give a report not only on the hectares involved, but also, and most importantly, on the manner in which the harvest was carried out. The work should be assumed by an honest, uncompromising representative of the kolkhoz or sovkhoz, up to and including the preparation of an official document and the unconditional elimination of the defective work methods that have been noted.

From Field to Base

It is extremely important to consider the form in which the produce is delivered from the harvested areas to the cities for prolonged storage. Experience has confirmed that during good weather the most correct method is to allow the tubers and root vegetables to dry out somewhat, and then to grade them by size directly in the field and to deliver them in containers. Alas, all the farms do not do this, and they give as justification a slight rain that has settled the dust, or, even more frequently, the shortage of people. Yes, during harvest time, of course, there are no extra workers. But if the job is well organized, it will subsequently be necessary to have incomparably fewer people required to sort over the potatoes and vegetables in the storage facilities.

Senior commodity expert at the "Grigor'yevka" Base, V. M. Zernova, shared her observations over a ten-year period of working in that capacity. Valentina Mikhaylovna feels that, out of the carrots that arrive to be put into storage, one-fourth can be **immediately** deducted. About five to seven percent of the overall tonnage is listed in the document as dirt; 10 percent as substandard; and the same amount as rejects. In other words, all this, with the passage of time, is written off. And yet, with careful grading right there in the field, the large and medium-sized vegetables with mechanical damages could go to the dining halls for current use, and the leftovers could be used to feed the livestock and poultry.

In somewhat lesser proportions, but still extremely sensitive ones, documents are drawn up for potatoes delivered from the farms -- that is to say, they are knowingly legalized for being written off. As much as 18 percent of the leaves and as much as 10 percent of the cut heads of cabbage are "thrown off" on the average from each machine, and during hauling.

Why are these losses so great? Why do they occur? And how can one prevent them? Experienced specialists feel, not without justification, that we must begin with the technology of laying in the supplies, which quite often is violated. For example, carrots are put not into cooled sand, but into warm; potatoes are shipped in such a way that no one knows what varieties they are -- early, late, or including those that cannot be stored for a long period of time. One of the tasks of the newly created Vologdaplodoovoshchkhov Association of the new ministry is to engage immediately in seed production in its subordinate farms and to observe strictly the rules for laying in supplies of produce for the winter.

There has been an excessive delay in resolving such a question of primary importance as the providing of good-quality storage facilities to the cities. Judged on the basis of their technical specifications lists, only a few of them have less than the necessary volumes. But, first of all, the difference between the paper capacities and the actually needed ones constitutes a gap of 20-25 percent. Therefore the potatoes and vegetables have to be loaded in a layer that is deeper than required, or have to be dumped into entryways or other additions to buildings. Secondly, the facilities themselves, to put it mildly, leave much to be desired. They do not have any guaranteed temperature conditions; the ventilation system is imperfect; and the devices for the mechanical loading and unloading of produce are not always convenient.

The time periods necessary for the construction of new facilities for the storage of vegetables are dragging out. For example, it was planned to turn over a storage facility for 4000 tons in the first half of 1980, but at best it will be ready to accept this year's harvest. According to computations made by the *oblplan*, by 1985 the extent to which the oblast is provided with facilities for the winter storage of potatoes will be 92 percent, and for vegetables, 75 percent. As for how many of the facilities will be cooled, no one in the planning commission could answer that question. And yet it is precisely in that kind of facility, as is confirmed by the experience in Dnepropetrovsk, that the produce is kept in excellent condition until the next autumn, or even longer.

When vegetables and potatoes arrive in mass quantities, a large amount of them is sent direct from the plantations to the stores for sale. Well, both economically

and in the sense of selling good-quality produce, the freshest produce, this is completely justified. However, there immediately arise sorry scenes that are repeated during harvest years. Because of poor dispatcher service and the lack of organization of the *gorplodoovoshchtorg* bases, trucks sometimes race back and forth across Vologda from one trade point to another. In the final analysis they are either sent back to the villages, or are unloaded, under pressure.

In the first instance, inasmuch as almost none of the farms have their own storage facilities, other than those for seeds, the trucks are rerouted to animal farms. In the second instance, the goods spoil, lose their attractive saleable appearance, and not infrequently get discarded instead of getting into the kitchen.

Railroad cars bring vegetables to Cherepovets, Vologda, and other neighboring cities from various parts of the country. As for watermelons, tomatoes, squash, in part cucumbers, and in May-June early cabbage, the importing of them is inevitable. But what about horse radish, turnip, and radishes? By what reasoning, one asks, are these vegetables -- which grow excellently locally in truck gardens -- shipped to ridiculously long distances, unjustifiably taking up space in the transportation facilities?

As strange as this may sound, the economic service of the Vologda *gorplodoovoshchtorg* which is headed by E. Tropina records only the losses, and far from all of them, at that. Together with the accountants, the planners have done very little to put an end to the poor management practices.

Recently an exceptionally important decree by the CPSU Central Committee and the USSR Council of Ministers concerning the efficient use of resources in all branches of the national economy was adopted. It was decided to increase the responsibility and intensify the sanctions for delivery of poor-quality output, and for spoilage and losses of assets during storage and sale. This pertains in particular to agricultural procurement and trade organizations. Taking good care of all the harvest that has been grown, the harvesting of which is just beginning, and delivering potatoes and vegetables in the best condition to the workers' table -- that is what is required today of the sovkhozes, kolkhozes, transport workers, bases, storage facilities, public-nutrition enterprises, and stores.

Voronezh Fruit Processing, Procurement

Moscow EKONOMICHESKAYA GAZETA in Russian No 36, Sep 81 p 18

[Article by N. Kozlov, EKONOMICHESKAYA GAZETA's own correspondent, Vorenezhskaya Oblast: "Fruits of Poor Management Practice"]

[Text] In the orchards of the Voronezh kolkhozes and sovkhozes and in the personal plots of the kolkhoz members, the apple trees are literally breaking apart from the weight of the fruit. Moreover, all varieties -- early, middle, and late -- have currently matured almost simultaneously.

One would think that people could only rejoice from such an abundant harvest. You can store up large supplies of everything -- fresh fruit, dried, and various kinds of canned fruit. But the procurement specialists again, just as they have in past years, have been completely unprepared for the fruit season. They absolutely refuse to accept the fruit from the public. Apples and pears are disappearing

in the orchards. The same situation is observed on kolkhozes that engage in orchard-growing. The fruits cover the ground, although the real place for them is in the fruit storage facilities, on the store shelves, and at the raw-material warehouses of the canning-industry enterprises.

The fruit spoils because procurement points of the Voronezhskaya *Oblpotrebsoyuz* have been opened up in only six rayons in the oblast. Before the beginning of the fruit season, the chairman of the *oblpotrebsoyuz*, Comrade Nikonov, in a long article that was published in KOMMUNA, the oblast newspaper, bragged of having organized the procurements in an exemplary manner, and gave assurances that the sad lessons that were learned in previous years, when the fruit perished in the orchards, had been completely taken into consideration. Actually, however, in the overwhelming majority of rayons the cooperative members did not find the time to create the necessary number of procurement points, much less worry about accepting the produce in the villages themselves.

In the current year a new association -- "Voronezhplodoovoshchkhov" (director G. Popov) -- began operating in the oblast. According to its concept, it is supposed to unify within itself the functions of production, procurement, processing, storage, and trade in fruit and vegetable produce; the elimination of departmental barriers is supposed to promote the complete preservation of all the fruits and vegetables that have been grown. This association, together with the oblast administration of the food industry (chief V. Kablashov), trade administration of the *oblispolkom* (chief N. Desyatiryakov), are supposed to worry about assuring the complete preservation and processing of all the fruit that has been grown.

Krasnodar Conference on Processing

Moscow SEL'SKAYA ZHIZN' in Russian 11 Oct 81 p 2

[TASS item: "Conference Opens"]

[Text] Krasnodar, 10 [October 1981]. (TASS). New methods of waste-free technology in the processing of fruits and vegetables are being discussed at the All-Union Scientific-Practice Conference that opened today in Krasnodar.

The conferees were addressed by Deputy Chairman of the USSR Council of Ministers, Chairman of USSR Gosplan, N. K. Baybakov.

Papers at the conference were also given by President of the Academy of Sciences, UkSSR B. Ye. Paton; First Secretary of the Krasnodarskiy Kray CPSU Committee S. F. Medunov; division chief at the Institute of Technical Thermophysics, Academy of Sciences, UkSSR V. R. Borovskiy; and chief of the Administration of the Food Industry of the Krasnodarskiy *Krayispolkom* L. I. Mironenko.

Participants in the work of the conference include Chairman of the USSR Council of Ministers, Chairman of GKNT [State Committee for Science and Technology] G. I. Marchuk; President of the USSR Academy of Sciences A. P. Aleksandrov; USSR Minister of the Food Industry V. P. Lein; Gosstandart Chairman V. V. Boytsov; prominent scientists, representatives of ministries and departments, Soviet and party workers, specialists in the food industry and agriculture, and guests from Bulgaria and the GDR [East Germany]. The conference on scientific practice will last for two days.

AGRO-ECONOMICS AND ORGANIZATION

DYNAMICS OF OUTPUT CAPITAL IN USSR AGRICULTURE

Moscow EKONOMICHESKAYA GAZETA in Russian No 39, Sep 81 p 10

[Article by A. Bulatov, assistant professor at the Academy of Social Sciences of the CC CPSU: "Output Capital in Agriculture"]

[Text] The rapid growth in the technical equipping of labor in agricultural production and the renewal and improvements in the logistical base of the kolkhozes and sovkhoses -- these are typical features of the modern stage of development. Agriculture, and this is a point which must be taken into consideration when evaluating the dynamics of output capital, is going through a capital intensive stage of intensification that is conditioned by the conversion of all branches of crop and animal husbandry over to a modern industrial basis. The initial mechanization of many laborious technological processes and the mass introduction of a complex of modern machines are nearing completion and the lag that developed between auxiliary and service subunits in the rural areas is being overcome.

Factors affecting the dynamics

All of this is leading to excessive growth in the volume of fixed and working productive capital being employed, compared to the production volume for agricultural output. Thus the average annual volume of gross agricultural output during the 1971-1980 period increased by 23 percent, whereas the volume of fixed capital of an agricultural nature increased by a factor of 2.2. During the Eleventh Five-Year Plan, the plans call for the average annual volume of gross agricultural output to be increased by 12-14 percent, the capital-labor ratio -- by a factor of 1.4 and labor productivity -- by 22-24 percent.

At the same time, we cannot agree with the attempts being made to present a reduction in output capital as a fatal inevitability caused by the process of replacing live labor in production through the operation of machine systems. Scientific-technical progress is creating the material prerequisites for subsequently raising output capital through a more intensive operation of a complex of highly productive fixed capital and through growth in the cropping power of the agricultural crops and in the productivity of animal husbandry. It is on this basis that an opportunity is becoming available for overcoming the adverse effects of natural-climatic conditions.

Under modern conditions, the dynamics of output capital in agricultural production can be improved through the rational formation of all means of production, while

taking into account the zonal conditions, raising the efficiency of those machines, equipment and technical resources which serve to ensure greater growth in labor productivity than in the capital-labor ratio and also more effective use of the fixed and working capital of kolkhozes and sovkhozes. In his report delivered before the 26th CPSU Congress, L.I. Brezhnev emphasized that "the center of gravity today -- and this is a distinctive feature of the agrarian policies during the 1980's -- is shifting over to the return being realized from capital investments, to growth in agricultural productivity and to strengthening and improving its links with all branches of the agroindustrial complex."

Improvements in Capital Formation

A weakening in and subsequent overcoming of the trend towards a reduction in output capital in agricultural production are determined first of all by the degree of use of two groups of factors. The first has to do with the production of machines and equipment and the conditions for logistical support for the kolkhozes and sovkhozes. The second group concerns improving the quality of the work of the machine operators and achieving more rational use of the machines and equipment on all of the farms.

With use being made of a tremendous amount of fixed capital, more and more importance is being attached to improving its qualitative structure (production properties, reliability, degree of comfort provided and economical status) and raising the qualitative level of the capital available at the kolkhozes and sovkhozes. In the future, each farm must have a complex of production means which will ensure maximum utilization of the biological potential of the land and the productivity of the animals.

An important direction to be followed for achieving qualitative improvements in the fixed capital is that of raising the productivity, durability and reliability of the machines and equipment. Over the past 15 years, the nomenclature for the machines employed in agriculture has been expanded by more than twofold and yet the operational reliability of the new models of certain machines remains low. For example, quite often the grain harvesting combines are unable to endure intensive operations throughout the course of just one harvesting season. This also applies to corn and potato harvesting combines and it represents the chief reason for their low seasonal output and considerable operating expenses per unit of product.

The solving of the problem of reliability assumes the development of a system of measures aimed at sharpening the requirements with regard to the designs for the new machines, their production technologies, the conditions for field testing and also the culture for their operation. Additional expenditures required for ensuring higher reliability for the machines will be repaid by means of increased output capital for agricultural production, through reductions in equipment idle time and in the periods for carrying out field work, in expenditures for spare parts and repair work and in crop losses and also through improvements in the quality of the products.

Progressive improvements in the formation of fixed capital are also associated with the accelerated development of the mass production of multiple-purpose type trailers and attachable machines. Special importance is being attached today to the intensive operation of equipment in complex with other measures for increasing

the production of goods. And this is easier to achieve through the use of multiple-purpose machine of the combined type, machines which are capable of simultaneously carrying out several technological operations and for the step-by-step cultivation of various crops (for example, grain, vegetable and sown grass crops). The mass production of such machines will make it possible to achieve a relative reduction in the nomenclature and metal intensiveness of the agricultural equipment in use, while simultaneously raising labor productivity, reducing the requirements for machine operators during the period of spring field operations and lowering production costs and the output-capital ratio.

During the past few years, a rapid increase has taken place in the pool of powerful, high speed and expensive tractors. During the 1970-1980 period, the cost of a tractor per horsepower increased by 25 percent. Thus the farms should have been supplied with farm levellers, wide-cut high speed soil cultivation and other machines and also trailers and semi-trailers for the transporting of freight. It is obvious that tractor deliveries must be carried out in synchrony with the selection of the agricultural machines to be used with them.

In connection with planning practice, we are of the opinion that use should ideally be made of the indicator "price of a unit of resource" for the consumer. This would promote a more effective solution for the task assigned by the 26th CPSU Congress -- raising the individual capabilities of the machines and equipment to their optimum limits while simultaneously reducing their size, metal-intensiveness and power consumption and lowering the cost per unit of final useful effect.

In the overall approach for the formation of the productive capital of kolkhozes and sovkhoses, an important role is played by the development of the breeding of highly productive animals and seed production for the agricultural crops, while taking into account the zonal production conditions. Standard animal husbandry complexes for the production of milk having all-round mechanization and a capital-intensiveness of 2,100-2,600 rubles per livestock billet, for example, have an average cow productivity of 3,500 kilograms of milk annually. Efficient operations by such complexes are possible only when high quality pedigree animals are maintained and they are properly fed. The use of low productivity cows and a weak feed base inevitably leads to a reduction in gross production and to an increase in the production cost per quintal of milk.

The modern organization of seed production for grain crops, which meets the requirements for stable growth in production, is making it possible to raise their cropping power by no less than 20 percent. The conversion of seed production over to an industrial basis will serve as an important link in the chain of measures aimed at raising the output capital in the grain economy, under conditions involving improvements in its all-round mechanization.

Rational Use of Equipment

An improvement in output capital in the production of agricultural products requires the observance of two most important relationships: leading growth in the productivity of agricultural labor over growth in its output-capital ratio and a leading increase in the production volume for gross output per hectare of arable land (agricultural lands), compared to an increase in the level of fund availability per unit of land area.

This is precisely what many leading farms throughout the country are achieving. At the Igriva Kolkhoz in Aluksnenskiy Rayon in the Latvian SSR, gross output production per 100 rubles of fixed productive capital increased from an average of 39.2 rubles during the 1971-1975 period to an average of 41.8 rubles during the 1976-1980 period. At the Put' Lenina Kolkhoz in Valkskiy Rayon, the output capital increased during this same period from 57.6 rubles to 62.4 rubles. The Kolkhoz imeni S.M. Kirov in Belzerskiy Rayon in Khersonskaya Oblast achieved an even higher indicator for output capital during the Tenth Five-Year Plan. Its average annual gross output production per 100 rubles of fixed productive capital amounted to 88 rubles. However, for the country as a whole the output capital in agriculture fell during the 1965-1979 period. During this period the fixed capital per 100 hectares of agricultural land increased by a factor of 3.7 (from 10,500 to 39,000 rubles), whereas the average annual volume of gross agricultural output increased by only a factor of 1.5.

As noted above, such a development is to a considerable degree objective in nature. However, this process reflects the availability of large reserves for raising the effectiveness of use of equipment at the kolkhozes and sovkhoses.

For example, the efficient operation of high speed wide-cut equipment is possible only through the use of progressive forms for organizing mass field and harvesting operations. It is known that a delay of more than 20 days in harvesting grain crops leads to losses of up to 20 percent in the crop. On the other hand, by reducing grain losses during the mowing, thrashing and transporting operations, it is possible to raise the actual yield by 2-3 quintals per hectare. The creation of harvesting-transport complexes involving the use of the watch-standing method of work by machine operators, based upon the experience of workers in Ipatovskiy Rayon in Stavropol'skiy Kray, is making it possible to reduce the harvesting periods for the grain and other crops and to lower the crop losses to a minimum. During the 1981 harvest campaign, the machine operators in Stavropol'skiy Kray made extensive use of the watch-standing method for organizing labor, replacing one another at the control every 4 hours. This enabled them to achieve a high productivity for their machines for 20 hours daily.

In our opinion, the principal indicator for the productive use of the machine and tractor pool at kolkhozes and sovkhoses must be the shift output per machine rather than the annual output. The shift output, combined with the coefficient for shift work, describes the daily output. The indicators of daily output are of decisive importance with regard to carrying out all of the work during the best periods and with minimal expenditures. Ideally, a conversion should also be made over to accounting for the use of tractors, combines and other machines not only on the basis of machine-days but also in terms of machin-hours. This will be of assistance in reducing the intra-shift idle time of the machines (through standardization of accounting and control over their operating time, together with the working time of the machine operators) and it will improve the organization of the socialist competition for highly productive use of the equipment.

Perhaps a considerable strengthening can take place in the organizational and mobilizational role played by the consolidated norms for fixed and working capital, in the formation of their proper volume and structure on specialized farms by zones throughout the country. In particular, consolidated norms should be established for material expenditures per ruble of gross output in crop and animal husbandry (by types), in addition to the existing partial norms for the expenditure of material values (seed, feed, fertilizers, fuel, electric power), with the local organs being authorized to differentiate them by farms.

In order to reduce operating expenses and raise output capital, importance is also attached to improving the preservation of the agricultural machines. This will be promoted by the fulfillment of the decree of the CC CPSU and the USSR Council of Ministers entitled: "Additional Measures for Ensuring the Preservation of Agricultural Equipment." By 1985, all complicated equipment located at kolkhozes and sovkhozes must be stored in covered facilities or under sheds. Greater interest and responsibility must be displayed by leading workers, specialists and machine operators with regard to observing the rules for the operation, storage and writing off of tractors, agricultural machines and transport means and equipment.

The active use of all reserves available for raising capital output in agricultural production will undoubtedly promote a strengthening of the process of its intensification.

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